Clinical Medicine

Original Articles for May, 1955

For initial therapy—in all cases:

SERPASIL, a pure crystalline alkaloid of rauwolfia root—particularly effective in the neurogenic forms of hypertension. *Acts centrally*—tranquilizes, moderately lowers blood pressure, slows heart rate.

Serpasil®

When combination therapy is indicated:

SERPASIL-APRESOLINE, a combination product offering convenience and economy in the more complicated cases involving both neurogenic and humoral factors.

Serpasil®-Apresoline®

In more refractory cases requiring further individualization of dosage:

APRESOLINE *acts centrally and peripherally* for a marked antihypertensive effect. Increases renal plasma flow—produces vasodilatation—inhibits pressor substances.

Apresoline®

Serpasil	Tablets, 0.1 mg., 0.25 mg. and 1.0 mg. Parenteral Solution (for neuropsychiatric use only), 2.5 mg. per ml., in 2-ml. ampuls. Elixir, 0.2 mg. per 4-ml. teaspoonful.
Serpasil-Apresoline	Tablets, each containing 0.1 mg. of Serpasil and 25 mg. of Apresoline. Tablets, each containing 0.2 mg. of Serpasil and 50 mg. of Apresoline.
Apresoline	Tablets, 10 mg., 25 mg., 50 mg. and 100 mg. Ampuls, 1 ml., 20 mg. per ml.

CIBA

a/ssm

SUMMIT, N. J.

in varicose vein

complications . . .

striking relief

of signs and symptoms

MY-B-DEN®

(adenosine-5-monophosphate)

Bischoff DIVISION

ulcers begin to heal[1-4]
pain and burning disappear[1-3]
pruritus subsides[1-4]
edema, erythema, and tenderness decrease[1-3]

Administration: MY-B-DEN may be administered in the office, hospital or home, 1 cc. (20 mg. or 100 mg.) intramuscularly three times weekly or as needed. *The site of injection is the upper outer quadrant of the buttock.*

Supplied: Sustained-Action MY-B-DEN (in gelatine solution): 10 cc. vials in two strengths, 20 mg. per cc. and 100 mg. per cc. adenosine-5-monophosphate as the sodium salt.

Also available: MY-B-DEN (NOT Sustained-Action) in ampules and sublingual tablets.

References: (1) Lawrence, E. D.; Doktor, D., and Sall, J.: Angiology *2*:405, 1951. (2) Rottino, A.; Boller, R., and Pratt, G. H.: Angiology *1*:194, 1950. (3) Boller, R.; Rottino, A., and Pratt, G. H.: Angiology *3*:260, 1952. (4) Pratt, G. H.: Surg. Clin. North America *33*:1229, 1953.

AMES COMPANY, INC • ELKHART, INDIANA

44488

TABLE OF CONTENTS

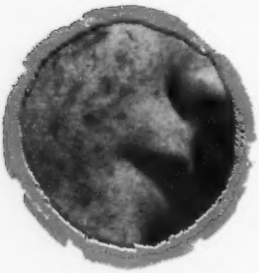
Vol. 2 May, 1955 No. 5

Editorial

Original Articles

Current Literature

(Continued on next page)



A 19 year old female with a 5 year history of cystic pustular scarring acne of face and back refractory to all other types of therapy.

After 12 weeks of treatment with "Premarin" Lotion applied to face only, remission is apparent. Untreated back remains unchanged.

Excellent results obtained

in acne vulgaris

with "Premarin®" Lotion

Conjugated Estrogens (equine) for topical application

The case illustrated above is typical of the response obtained with "Premarin" Lotion in 70 to 80 per cent of patients of both sexes with refractory chronic acne of the cystic and pustular types.[1] "Premarin" Lotion was found particularly suitable because it provides concentration of medication at site of desired action; permits dosage control to eliminate possibility of side effects; and is esthetically acceptable to both male and female patients.

also effective in seborrheic alopecia

Within three to six weeks, control of scaling and itching and reduction of hair loss, particularly about the vertex of the scalp, were noted following application of "Premarin" Lotion, two or three times a day. No systemic effects were noted.[2]

Supplied: No. 875—Bottles of 60 cc. with applicator. Each cc. contains 1 mg. of estrogens in their naturally occurring, water-soluble conjugated form expressed as sodium estrone sulfate.

Detailed information available upon request.

1. Shapiro, I.: Postgrad. Med. *15*:503 (June) 1954; J. M. Soc. New Jersey *52*:6 (Jan.) 1955.
2. Shapiro, I.: J. M. Soc. New Jersey *50*:17 (Jan.) 1953.

6544

Ayerst Laboratories • New York, N. Y. • Montreal, Canada

Ayerst

TABLE OF CONTENTS *(Continued)*

MANUSCRIPTS should be addressed to The Editor, *Clinical Medicine*, P. O. Box M, Winnetka, Illinois. Manuscripts accepted only with the understanding that they are contributed exclusively to *Clinical Medicine*. Manuscripts should be typed double or triple-spaced, on one side of the paper only. Drawings or photographs will be reproduced at no cost to the author. Bibliographic references should be kept to a minimum.

REPRINTS Authors will be furnished reprints at cost. Manuscripts, when accepted become the exclusive property of *Clinical Medicine*.

BREAK THE VICIOUS CIRCLE

with

CAUSALIN—

A newly improved anti-rheumatic — *especially indicated for arthritis* — which stops the syndromic merry-go-round of "pain-immobility-spasm-pain."[1]

FOUR REASONS WHY CAUSALIN IS SUPERIOR

1. **CAUSALIN contains Salicylamide** (300 mg.)*, an effective antipyretic[2] with analgesic potency reported to be much greater than that of aspirin and the other salicylates[3, 4, 5, 6, 7]. It is also "considerably less toxic"[4, 8].

2. **CAUSALIN contains Mephenesin** (150 mg.)* a powerful anti-spasmodic.[9]

3. **CAUSALIN contains Calcium Paraminobenzoate** (50 mg.)* which, in synergic union with salicylamide, results in the increased blood concentrations of each.[10, 11, 12, 13]

4. **CAUSALIN contains Ascorbic Acid** (50 mg.)* which compensates for two separate losses of Vitamin C—that resulting from rheumatism, itself, and that from salicyl-administration.[14]

*per tablet

THE MEDICAL VERDICT

(on CAUSALIN'S key elements)

(A) Non toxic **Mephenesin** has "an unusual ability to relax skeletal muscle . . . in spasm"[15,16], promotes "euphoria" and "freedom from nervousness and tension."[17, 18].

(B) "(Salicylamide) has an anti-rheumatic, analgesic and antipyretic effectiveness . . . hardly approached by the other salicylic acid compounds."[3] (For similar evaluations see[4, 7, 19, 20].)

INDICATIONS: Rheumatoid arthritis, osteo-arthritis, rheumatic fever and related disorders.

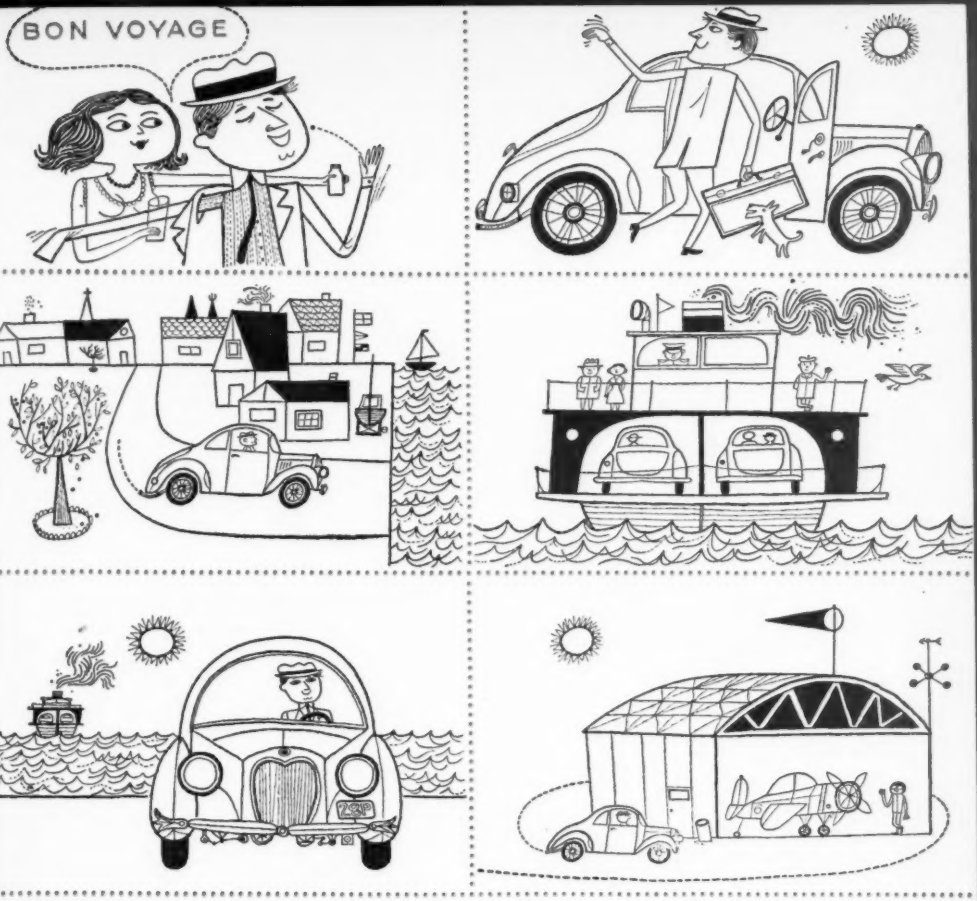
DOSAGE: For adults and children over 6 years of age: 2 **CAUSALIN** tablets every 4 hours until pain is relieved. Then 1 tablet every 4 hours.

For small children: ½ to 1 tablet in milk every 3 or 4 hours. Then reduce gradually to ½ tablet 3 times daily.

CAUSALIN tablets are available in bottles of 50, 100, 500 and 1000.

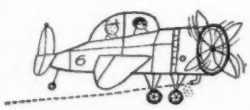
Samples and references mailed on request.

AMFRE DRUG CO., INC.
New York 10, N. Y.



. . . *a comfortable voyage now assured with* **Bonamine**®

BRAND OF MECLIZINE HYDROCHLORIDE



. . . the first motion-sickness preventive effective in a single daily dose

. . . prevents or relieves motion sickness due to all forms of travel

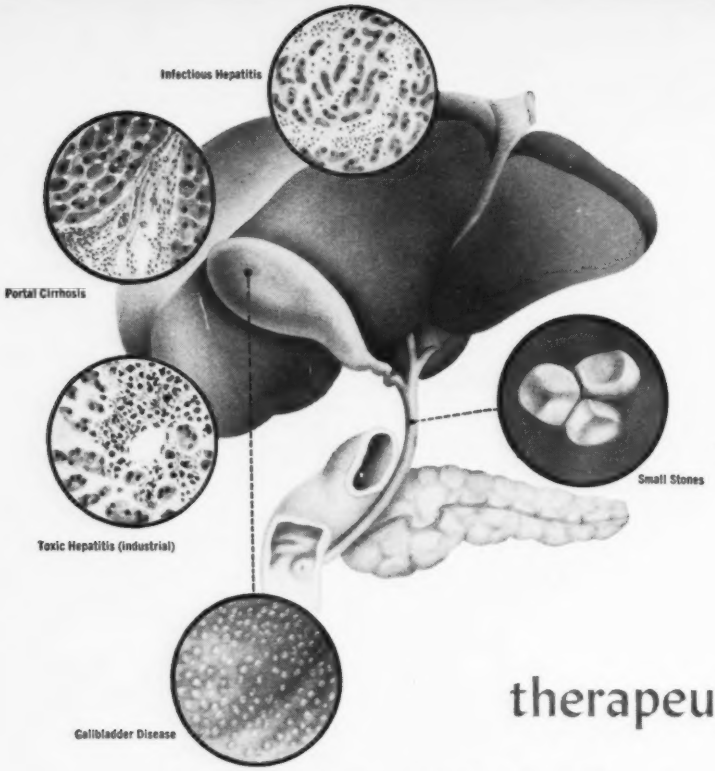
. . . available on prescription only for full physician supervision

Bonamine *is also useful in controlling the nausea, vomiting and vertigo associated with morning sickness of pregnancy, vestibular and labyrinthine disturbances, cerebral arteriosclerosis, radiation therapy and Menière's syndrome.*

Supplied in scored, tasteless 25 mg. tablets, boxes of 8 and bottles of 100 and 500. ®TRADEMARK

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

Pfizer



therapeutic bile

in liver and gallbladder disorders

"...due to the production of true hydrocholeresis—
a marked increase both in volume and fluidity of the bile."*

"...the objectives of the principal therapy cannot but be furthered...."*

"...confirmed further by the clinical experiences reported."*

DECHOLIN® and DECHOLIN SODIUM®

(dehydrocholic acid, *Ames*) (sodium dehydrocholate, *Ames*)

Decholin Tablets, 3¾ gr. (0.25 Gm.); bottles of 100, 500, 1000. *Decholin Sodium*, 20% aqueous solution; ampuls of 3 cc., 5 cc. and 10 cc.; boxes of 3, 20 and 100.

*Schwimmer, D.; Boyd, L. J., and Rubin, S. H.: Bull. New York M. Coll. *16*:102, 1953.

AMES COMPANY, INC • ELKHART, INDIANA

Ames Company of Canada, Ltd., Toronto

63155

Clinical Medicine

CLINICAL MEDICINE published monthly by Clinical Medicine Publications, Inc. P. O. Box M, Winnetka, Illinois. Published at 535 S. Sheridan Road, Waukegan, Illinois. Address all communications to P. O. Box M, Winnetka, Illinois. Contents copyrighted, 1955 by Clinical Medicine Publications, Inc. Entered as second class matter April 1, 1954 at the Post Office at Waukegan, Illinois under Act of March 3, 1879.

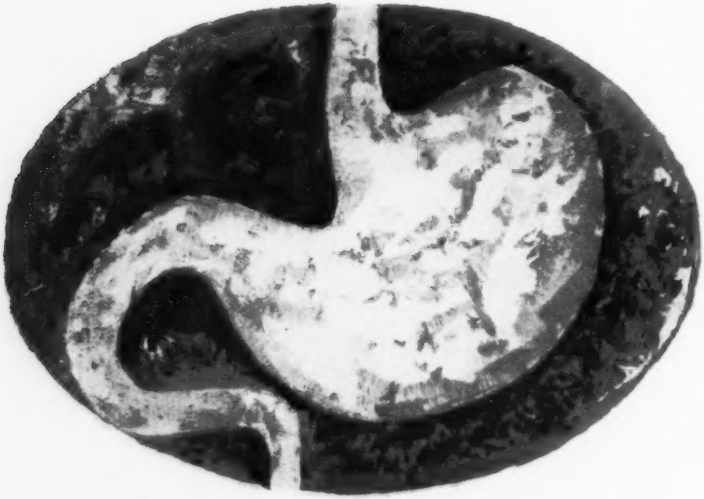
SUBSCRIPTION PRICES United States and possessions and Canada, $5.00 yearly. Other countries add $1.00 yearly additional charge. Remit by postal money order or draft on United States Bank. Single copy 50¢.

ADDRESS CHANGES Notify us promptly of any change of address, mentioning both your old and new addresses. We cannot hold ourselves responsible if changes are not received as above. Complaints over three months old, usually cannot be honored.

CORRESPONDENCE Address all correspondence to *Clinical Medicine*, Post Office Box M, Winnetka, Illinois.

NOW...PIPERIDOL ACTION

for peptic ulcer pain≠spasm



cholinolytic

PIPTAL®

relief day and night*

WITH

- minimal effect on bowel and bladder
- normalized gastric secretion
- normalized gastrointestinal tonus and motility

*1 tablet t.i.d. before meals and 1 or 2 tablets at bedtime

Lakeside Laboratories, Inc., Milwaukee 1, Wisconsin

PIONEERS IN PIPERIDOLS

88955

EDITORIAL

The Failing Heart and Its Management

Here are opinions and practices of a number of authorities who participated in a panel discussion at the New York Academy of Medicine

---

JAMES M. NORTHINGTON, M.D., *Editor*

The failing heart is one in which the myocardium cannot propel blood sufficient for the needs of the total bodily metabolism, and so there results the syndrome of venous congestion, whether back of the right ventricle to cause congested veins, a large liver and edema, or back of the left ventricle to give dyspnea, orthopnea and rales.

Venous congestion may occur without a failing heart; e.g., an anuric patient with lower-nephron nephrosis overloaded with IV fluids, shows engorged neck veins and a large liver; he becomes edematous, develops rales, often pulmonary edema, and he may die.

TACHYCARDIA

In case of congestive heart failure as a result of auricular tachycardia — assuming that simple conservative measures such as carotid pressure, ocular pressure, induced vomiting, or sedation have not controlled the tachycardia — digitalization is indicated, provided the patient has not had any digitalis in the recent past.

If the patient with paroxysmal tachycardia is in serious condition, the parenteral use of a glycoside is indicated. If in good condition, then oral digitalization. Quinidine, if it does not work, may prevent the action of other measures.

In a ventricular tachycardia, with myocardial infarction, there is every reason to attempt to suppress that tachycardia, the danger being of course ventricular flutter or ven-

tricular fibrillation and death. Here one need not hesitate to use Pronestyl, or if you wish, quinidine. In case of ventricular tachycardia with complete A-V dissociation, Pronestyl, instead of preventing the tachycardia tends to potentiate it. In Adams-Stokes attacks, give orally unless urgent reason to give it *IV*—not faster than 100 mg. per min. to a maximum of 1 gm. The dosage by mouth is the same, as it is readily absorbed.

Pronestyl acts well in ventricular tachycardia due to digitalis. One may fail to recognize that the tachycardia is due to the digitalis, and so digitalize further.

My first choice in treatment of the failing heart is crystalline digitoxin. If need is very urgent, then one of the lantosides or ouabain IV.

Many of my patients who were originally digitalized by means of whole leaf are still continued on the whole leaf.

TOXIC REACTIONS

If toxicity should occur, the toxic manifestations may persist for several days or weeks. Digoxin is rapidly dissipated. Many patients cannot tolerate any equivalent dose of digitoxin, digitalis leaf or Digoxin. If you use gitalin in many of these patients, you can now obtain a therapeutic effect, because they will not become toxic with equivalent doses. For the usual patient we prefer gitalin, since it has a greater range. It does not persist in its toxicity as long as digitalis leaf, squill or digitoxin. However, in patients with advanced heart disease where you are afraid of irritability, then Digoxin is the drug of choice.

Approximately, 0.5 mg. gitalin is equivalent to 0.1 gm. of leaf or 0.1 mg. digitoxin. If you have time, it is a toss-up whether you take digitalis leaf, Digoxin, digitoxin, gitalin or any of the other preparations. If you have learned to know one preparation and how to use it, it will behave well for you. In an emergency, use Digoxin or ouabain. Ouabain is fastest, will produce its effect in 15 min., Digoxin in 30 min. Ouabain 0.5 mg. intravenously is the initial dose; if no effect, 0.2 mg. after half an hour. Digoxin 0.5 mg., repeat after half an hour—no more than 1.5 mg. within the first hour. If I get into trouble with any of the glycosides or the other preparations, I almost always wipe the slate clean and go back to good old digitalis leaf.

Bull. New York Acad. Med., Oct., 1954.

4-wheel drive takes you to your patient ...wherever he is!

When your patients need you quickly, you must be *sure* of getting through. And you *can* be sure if you make your calls in a 4-wheel drive 'Jeep' Station Wagon.

For 4-wheel drive gets you through mud, sand, ice and snow—over bad roads or no roads at all—as no ordinary station wagon can. And you can easily shift to 2-wheel drive for normal driving.

Between calls, it serves as a roomy passenger car that carries six persons in smooth-riding comfort...or it provides cargo space of over 100 cubic feet.

To enjoy the peace of mind of *knowing* you can get through in all weather, get the facts about the 4-wheel drive 'Jeep' Station Wagon. Why not see your Willys dealer today?

How does 4-wheel drive work ? 4-wheel drive vehicles offer *selective* 2 or 4-wheel operation. In 4-wheel drive, the engine power is transmitted to all four wheels at once, rather than to the rear wheels alone, thus utilizing the entire weight of the vehicle for maximum traction. A special low-gear range provides extra pulling power, when needed.

4-wheel drive 'Jeep'® Station Wagon

WILLYS...world's largest maker of 4-wheel drive vehicles

WILLYS MOTORS, INC., TOLEDO 1, OHIO

Establishing desired eating patterns

Obedrin®

and the 60-10-70 Basic Diet

With Obedrin and the 60-10-70 Basic Diet, the overweight patient receives specific, proved aids to control overeating. Loss of weight is accomplished more comfortably, while the patient develops new and better eating habits.*

OBEDRIN CONTAINS:

Methamphetamine for its anorexigenic and mood-lifting effects.

Pentobarbital as a corrective for any excitation that might occur.

Vitamins B_1 and B_2 plus niacin for diet supplementation.

Ascorbic acid to aid in the mobilization of tissue fluids.

Obedrin contains no artificial bulk, so the hazards of impaction are avoided. The 60-10-70 Basic Diet provides for a balanced food intake, with sufficient protein and roughage.

*Eisfelder, H. W.: Am. Pract. & Dig. Treat., *5*:778 (Oct. 1954).

FORMULA:

Semoxydrine HCl (Methamphetamine HCl) 5 mg.; Pentobarbital 20 mg.; Ascorbic acid 100 mg.; Thiamine HCl 0.5 mg.; Riboflavin 1 mg.; Niacin 5 mg.

Write for 60-10-70 Diet Pads, Weight Charts, and samples of Obedrin.

The S. E. MASSENGILL COMPANY

Bristol, Tennessee

a "good" infant formula on paper isn't always enough

Bremil®

for successful infant feeding... in practice

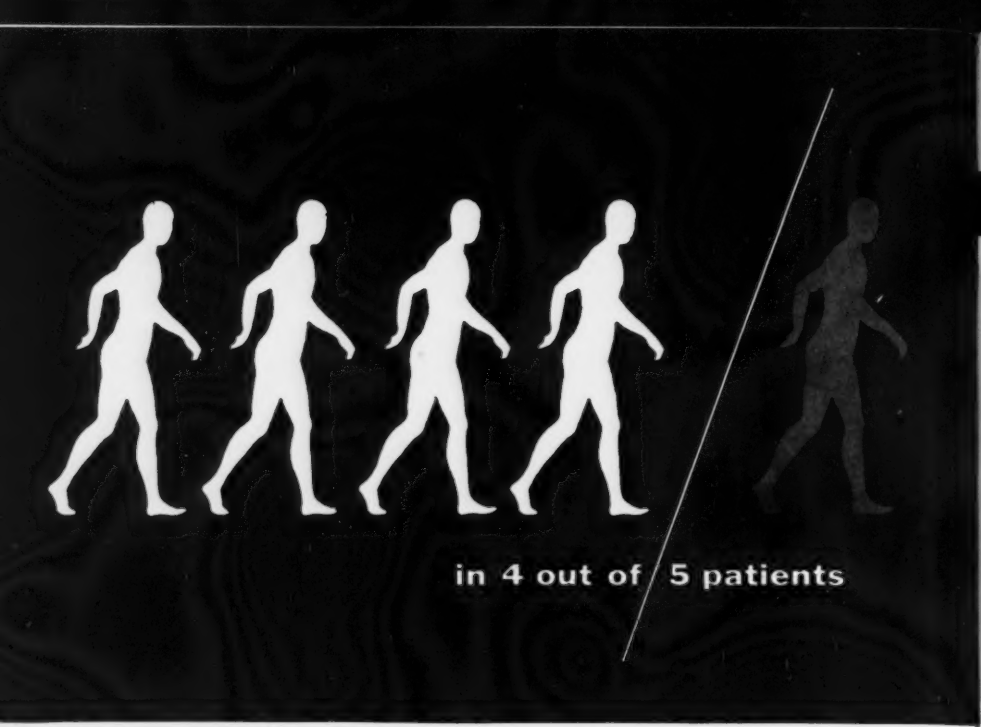
Controlled clinical experience[1] with a BREMIL® formula has demonstrated remarkable freedom from common, annoying feeding reactions such as diaper rash, colic, vomiting, diarrhea, persistent irritability, and sensitivity reactions.

Unique for the "peaceful" feeding of normal infants... costs no more than ordinary formulas requiring vitamin and carbohydrate modification.

Standard dilution for a nutritionally complete formula — 1 level tablespoonful of BREMIL to 2 fl.oz. water.

1. Oberman, J. W., and Burke, F. G.: M. Ann. District of Columbia, 23:483, 1954.

Borden's PRESCRIPTION PRODUCTS DIVISION
350 Madison Avenue, New York 17



you can prevent attacks of angina pectoris

Peritrate, a long-acting coronary vasodilator, has repeatedly demonstrated its effectiveness in preventing attacks of angina pectoris in 4 out of 5 cases.[1,2,3]

Prophylaxis with Peritrate results in fewer, less severe attacks, reduced nitroglycerin dependence, improved EKG's where abnormal patterns exist and increased exercise tolerance.

Peritrate's action is similar to that of nitroglycerin but considerably more prolonged . . . "favorable action [can] be elicited for 5 hours or more after its administration."[4]

Usual dosage is 10 to 20 mg. *before meals* and at bedtime.

The specific needs of most patients and regimens are met with Peritrate's four dosage forms. Peritrate is available in both 10 and 20 mg. tablets; Peritrate Delayed Action (10 mg.) allows uninterrupted continuation of protection through the night. Peritrate with Phenobarbital (10 mg., with phenobarbital 15 mg.) where sedation also is required.

1. Winsor, T., Humphreys, P.: Angiology *3*:1 (Feb.) 1952. 2. Plotz, M.: N. Y. State J. Med. *52*:2012 (Aug. 15) 1952. 3. Dailheu-Geoffroy, P.: L'Ouest-Médical, vol. 3 (July) 1950. 4. Russek, H. I., *et al.*: Am. J. M. Sc. *229*:46 (Jan.) 1955.

Peritrate®

tetranitrate

(BRAND OF PENTAERYTHRITOL TETRANITRATE)

WARNER-CHILCOTT

The Rheumatic Disorders and Their Treatment by Means of a Potentiated Salicylamide Combination

Classification of the rheumatic diseases and diseases of the joints, their characteristic symptoms and the new methods of treatment

LUCIUS F. HERZ, Ph.B., M.D., *New York, New York*

The terms "rheumatism" and "rheumatic diseases" are now properly used to refer to a large group of diseases of the musculo-skeletal system characterized by pain and stiffness of the joints, muscles and related structures, the connective tissue around the joints and, in some instances, the fibrous tissue in a wide variety of organs. Among the chronic diseases, rheumatism ranks first in incidence and second only to nervous and mental disorders as causes of disability.[1] It is estimated that, in the United States, 300,000 people are made unemployable by rheumatic disease annually and 147,000 are rheumatic invalids.[2]

1. Swaim, L. T.: *Ann. Rheumat. Dis.*, 5: 192, 1946.
2. Mettier, S. R.: *Am. Pract.* 4: 196, 1949.

The classification in Table 1 of the diseases of the joints, somewhat abbreviated, has been recommended by the American Rheumatism Association.

The two commonest forms of arthritis are rheumatoid and degenerative (osteo-) arthritis.

Rheumatoid arthritis causes greater crippling, distortion and deformity of the joints than osteo-arthritis, frequently accompanied by muscular atrophy. It is three times as common in women as in men and is essentially a disease of young people, the average age at the onset being 35 years.

In the early stages, swelling of the joint is the most characteristic feature, this swelling due to active

TABLE 1—CLASSIFICATION OF DISEASES OF THE JOINTS

1. Arthritis due to infection
2. Arthritis due to rheumatic fever
3. Rheumatoid arthritis
   a. Multiple rheumatoid arthritis (atrophic arthritis)
   b. Still's disease (juvenile type)
   c. Rheumatoid spondylitis (Marie-Strumpell disease; ankylosing spondylitis)
4. Traumatic arthritis
5. Neurogenic arthroplasty
6. Arthritis due to gout
7. Degenerative joint disease (osteo-arthritis; hypertrophic arthritis); degenerative arthritis
8. New growth of joints
9. Intermittent hydrarthrosis
10. Para-articular and periarticular conditions such as fibrositis, myositis, bursitis, neuritis and neuralgia.

inflammation in all parts of the joint and the surrounding soft tissues. The villous processes are greatly hypertrophied, and in advanced cases granulation tissue extends over the articular surfaces of the joint in the form of a pannus which eventually is converted into dense fibrous tissue, which binds the articular surfaces together in fibrous ankylosis. In other instances, ankylosis does not occur, but the cartilage ulcerates and there is an increase of fluid in the joint cavity. Finally, subluxations and distortions of the affected joints lead to deformities characteristic of the disease.

In addition, a certain amount of atrophy occurs in the long bones, in the muscles and in the skin. In an advanced case of rheumatoid arthritis, the bones are smaller and more brittle than normal, the muscles are wasted and the skin over the affected parts is thin, tight and glossy.[3]

Osteo-arthritis is characterized by atrophy and degeneration of the cartilage with hypertrophy of the bone margins, and results from prolonged hard usage, strenuous activity or excessive obesity. It has a familial prevalence and may be associated with a hypothyroid condition, diabetes, arteriosclerosis, angina and coronary sclerosis.[4] It generally occurs after the age of 40.

The blood albumin-globulin ratio tends to reverse itself in rheumatoid arthritis, with a decrease in albumin and an increase in globulin.[5]

A spinal form of rheumatoid arthritis known as Marie-Strumpell disease occurs in males in 95% of cases, beginning at the lower back, eventually obliterating the sacroiliac joints and accompanied by calcification of the ligaments, "poker spine," "seal" neck, and loss of lumbar lordosis.

Gout occurs in males in 98% of cases, is monarticular and acute during the first attack in 95% of cases. It involves the weight-bearing joints especially. Tophi occur late. The disease may produce permanent crippling of the patient insidiously over a period of years.

Fibrositis—More critical exami-

3. Cecil, R. L., Loeb, R. F.: *A Textbook of Medicine*, W. B. Saunders Co., 1952.

4. Hyman, H. T.: *An Integrated Practice of Medicine*, W. B. Saunders Co., 1947.

5. Fahlstrom, S.: *Illinois M. J.*, 102: 372-3, 1952.

TABLE II—DIFFERENTIAL DIAGNOSIS OF RHEUMATOID ARTHRITIS

	RHEUMATOID ARTHRITIS	DEGENERATIVE ARTHRITIS
Average age at onset	3rd and 4th decades	5th and 6th decades
Weight	Normal or under	Usually overweight
Condition of bones	Osteoporosis	Condensation of articular margins
Joints involved	Any	Chiefly knees, spine and fingers
Type	Migratory	Not migratory
Appearance of joints	Periarticular swelling	No swelling
Special signs	Fusiform finger joints	Heberden's nodes
Subcutaneous nodules	Present in 10%	Never present
Strep. agglutinins	Usually present	Never present
Sedimentation rate	Considerably accelerated	Normal or slightly accelerated
Course	Usually progressive	Stationary or slightly progressive
Termination	Ankylosis and deformity	No ankylosis. Usually no deformity

nation is needed of cases of so-called fibrositis. Many cases of "lumbago" have been found to be due to a herniation of a lumbar vertebra, and study of the lesions of the supraspinatus tendon and the rotator cuff of the shoulder leads to a better understanding of fibrositis of the shoulder, whilst in some cases a scientific explanation of spasm of the muscles of the shoulder girdle may be found in pressure on the roots of the brachial plexus by cervical disc lesions and osteoarthritis which evoke a reflex muscle spasm. Epidemic myalgia can afflict the muscles so as to be termed fibrositis. Of course fibrositis *per se* may exist in any of these syndromes.

Sciatica—Sciatica pain may be caused by a herniated lumbar vertebra. Such cases may be treated with Causalin with good palliative effect, but will be cured only by spinal fusion.

Rheumatic Fever with its associated carditis is responsible for: (1) more deaths in children of school age than any other disease or than diphtheria, poliomyelitis, measles, mumps, whooping cough and meningococcic meningitis combined; (2) more cardiac crippling among young adults; (3) greater confusion in regard to differential diagnosis, and (4) greater potential false crippling by wrong diagnosis and management than any other disease.

Most characteristic is pain with redness, tenderness and swelling in one or several joints, then subsiding only to recur in other joints similarly. Knees, ankles, elbows, shoulders and small joints of the hands and feet seem to be the order of predilection. In children, pain, swelling and tenderness may be rather marked, a child is apt to have only one or two joints involved. Sometimes the duration is relatively short and occasionally the migratory character persists for a considerable period. Polyarthritis appears at the onset in 25% of the attacks of rheumatic fever in children; fully two thirds of patients have this manifestation at some time during their rheumatic career.

In the treatment of any form of arthritis and allied painful conditions, many physicians throughout the country have reported excellent results by the use of Causalin.*

The rationale of Causalin therapy is presented by discussing first the therapeutic usages of its separate ingredients and then their increased effectiveness when combined.

Salicylates. The preeminence of the salicylates in the treatment of the arthritides is universally accepted. Rheumatic fever affects predominantly the messenchymal structures whose principal substrate is hyaluronic acid. Salicylates inhibit the action of hyaluronidase which has the power of hydrolyzing hyaluronic acid and this is perhaps the mechanism by which salicylates exert their beneficent effect in rheumatic fever.

Salicylamide is better tolerated than other forms of salicylates, is as potent but less prone to side effects than aspirin. Salicylamide may be used wherever aspirin or sodium salicylate had been previously employed. Like these drugs, it has marked analgesic and antipyretic properties but is better tolerated. It will not produce gastric upsets and will rarely cause tinnitus aurium.

Calcium Para-aminobenzoate. — The salts of para-aminobenzoic acid increase the blood level of salicylates. Dry, et al.[6] report a case of rheumatic fever, in which, in spite of a liberal intake of salicylates (10 gm. per day), blood salicylate level did not rise above 12.5 to 15 mg. per 100 c.c. Para-aminobenzoic acid was given, 4 gm. at the first dose and 2 gm. every 2 hours, the salicylate dose being unchanged. A steady increase of blood salicylate occurred until it reached 34.5 mg. per 100 c.c., with corresponding relief of symptoms. In another series,[6] 44 patients were given this combination, and 34 showed decrease in joint pain, heat, swelling and tenderness, and in size of subcutaneous nodules; increased range of motion; defervescence (if any fever) and often striking weight gain.

Mephenesin a relaxant of muscles without paralysis, has been found helpful in rheumatic diseases including spondylitis and lumbago and also in chronic subdeltoid bursitis and sacro-iliac strain.

Ascorbic Acid administration prevents depletion of this vitamin by salicylatis.

Causalin with its combination of salicylamide potentiated by calcium para-benzoate and assisted by the muscle relaxant menephesin plus ascorbic acid is a useful combination in arthritis.

It appears to be effective in all forms of arthritis and in many other painful conditions. It has proven useful in dysmenorrhea. In all these conditions, it exerts its therapeutic effects by means of the high salicylate blood level produced by the synergistic action of salicylamide and para-aminobenzoate. A further valuable effect is the muscle relaxing action of the mephenesin component.

There are no contraindications to its use in contrast to cortisone and ACTH which are contraindicated in such conditions as peptic ulcer, tuberculosis, hypertension and psychoses. It is well tolerated and, unlike cortisone and ACTH, may be given without rest periods, and will not cause such undesirable effects as generalized edema, hypertension or moon face, resembling Cushing's syndrome.

Furthermore, not being enteric-

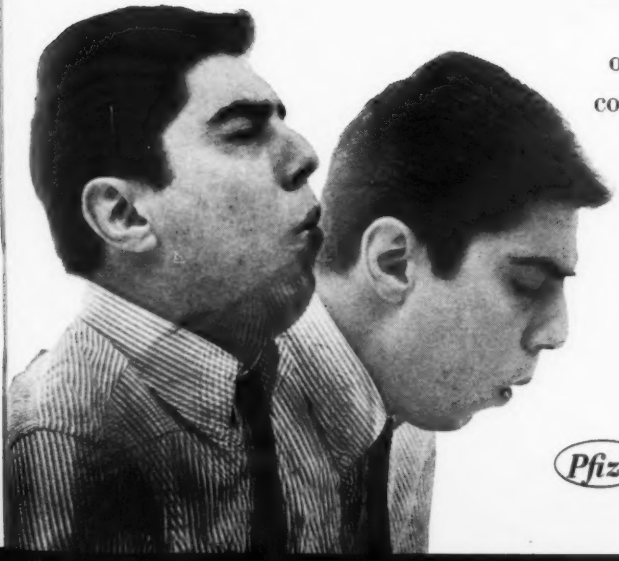
* ® Amfre Drug Co., New York, New York. Each tablet contains: Salicylamide, 300 mg.; Mephenesin, 150 mg.; Calcium Para-aminobenzoate, 50 mg.; Ascorbic Acid, 50 mg.

6. Dry, T. J.: *Proc. Staff Meet. Mayo Clin.* 21: 497-504, 1946.

Now...control of irritating, exhausting cough with *new*

TOCLASE

without the undesirable effects associated with the usual opiates or their derivatives commonly employed in cough control.



Toclase Syrup
Bottles of one pint

Toclase Expectorant Compound
Bottles of one pint

Toclase Tablets
25 mg., bottles of 25

*TRADEMARK

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

coated, it is rapidly absorbed and so acts quickly. As it contains no sodium radical, it may be given in cases of edema, hypertension, cardiac failure and nephritis where a salt-free diet is prescribed. There are no known contraindications.

CONCLUSIONS

1. Causalin appears to be a potent treatment for the various types of arthritis and allied conditions.

2. Its salicylamide content has a powerful analgesic and antipyretic effect.

3. Its para-aminobenzoate component brings about and maintains a high blood salicylate content with high therapeutic efficacy.

4. Its mephenesin content causes relaxation of spastic muscles and its ascorbic acid component prevents depletion of that vitamin by salicylate therapy.

5. It is safe and effective, may be given continuously and there are no known contraindications to its use.

No ECG Distortion From Somatic Tremor

A simple technique for preventing the distorting effect of tremor on the ECG record involves the use of a set of self-retaining electrodes applied to the shoulders and thighs of the patient instead of on the extremities. An electrode placed anywhere on an extremity records as though it were at the junction of the extremity with the trunk.

B. H. Pastor, *J.A.M.A.*, 156:314, 1954

Gastrointestinal Hemorrhage

The majority of hemorrhages subside quickly; surgery is indicated if bleeding does not subside or is recurrent

LORIN D. WHITTAKER, M.D., *Peoria, Illinois*

Fortunately, hemorrhage from the gastrointestinal tract usually follows certain patterns, which are made evident by a careful history, physical examination and simple routine laboratory procedures. The diagnosis may be made with more accuracy and speed and treatment carried out more effectively if a planned procedure is followed.

THE PRELIMINARY SURVEY

A good review of the past and present history including an orderly question survey of the gastrointestinal tract provides much information. Hematemesis almost invariably places the source above the ligament of Treitz, above the pylorus if bright red. Massive hemorrhage and a history of alcoholism suggests esophageal varices as the source. Less severe hematemesis and melena plus loss of weight and appetite suggest carcinoma of the stomach. A history of duodenal ulcer, with or without hemorrhage, may be obtained. If a suggestive history is associated with red to coffee-ground vomit, and with melena, a diagnosis of bleeding duodenal ulcer seems assured. A more massive hematemesis suggests a gastric or esophageal, rather than a duodenal, lesion. A history of recent mental or physical strain or respiratory infection followed by hemorrhage strongly suggests a bleeding peptic ulcer.

Melena suggests bleeding from the upper small bowel, generally a duodenal ulcer. Reddish brown

blood, however, may be seen rectally if bleeding from the upper small bowel is severe. In children red to reddish-brown blood may mean a Meckel's diverticulum or blood dyscrasias. Blood mixed with mucus, with a change in the bowel habit, suggests carcinoma of the colon.

The degree of pallor, thirst, sweating, vomiting and hypotension gives a quick index to the extent of the hemorrhage. A rapid recovery from these symptoms suggests a cessation of bleeding which has usually been brisk but not severe. A palpable liver and ascites suggests cirrhosis; evident weight loss suggests carcinoma of the stomach. Good physical condition suggests a duodenal ulcer. Abdominal distention, or other signs of partial obstruction, suggest carcinoma or diverticulitis of the colon. Abdominal or rectal examination may demonstrate a tumor mass. Bleeding from other areas than the GI tract suggests blood dyscrasia.

Laboratory studies include urine, routine blood count, hematocrit and prothrombin time. Early in hemorrhage the count may be misleading.

This study of the patient takes only a few minutes, yet the presumptive diagnosis can be established in 75% to 90% of the cases of hemorrhage.

FURTHER INVESTIGATION

How further investigation is carried out is dependent upon the degree of hemorrhage. If the hemorrhage is massive, supportive and replacement treatment has been started at once and is continued as necessary. If the bleeding is less severe, a more deliberate approach is possible.

The keystone of further investigation is the x-ray examination, which, along with the preliminary survey will reveal the lesion in 90% of the cases. Some prefer immediate x-ray examination and esophagogastroscopy; others await cessation of hemorrhage. Our attitude is to support the patient until bleeding has been arrested for seven to 10 days. X-ray examination during active bleeding increases the difficulties of control. The early insecure clot that blocks the bleeding vessel may be dislodged by the manipulation. Furthermore, edema about an ulcer, or a clot within the crater, may prevent visualization of the ulcer at early x-ray examination.

The same attitude pertains to esophagogastroscopy, with certain reservations as to persistent massive bleeding. If the evidence suggests bleeding from the esophageal varices of cirrhosis, we order at once a bromsulfaline liver-function test: in case of 25% to 50% retention after 15 minutes, we may assume our suspicion is correct. If bleeding has subsided, we delay several days for further examination. If vomiting of blood is severe and persistent, we may advise immediate esophagogastroscopy. If bleeding varices are found, tamponage by the two-bag method may be instituted as a life-saving method. Treatment must not be compromised by delay in diagnosis. Based on our preliminary survey, treatment is instituted and carried out as is indicated.

This first x-ray examination may not reveal a lesion. The patient may have returned to well being and may never bleed again. We must, however, exhaust all means to uncover the cause of these obscure GI hemorrhages.

Repeated x-ray studies using special techniques is the next step. Careful search of the stomach must be made for small tumors, polyps, hypertrophic or atrophic gastritis, para-esophageal hernia and other lesions. Since 60% of GI hemorrhage is from duodenal ulcer, the

duodenum must be carefully studied using all the various positional, manipulative and barium swallow techniques. Superficial ulcers, particularly of the posterior duodenal wall; filling defects of small tumors, irritability of duodenitis and other informative conditions may be noted. Careful serial studies must then be carried out on the small bowel for tumor, diverticula, granuloma, and other lesions. If red or reddish-brown blood is noted rectally, the same careful study of the colon must be made following careful proctoscopy.

Esophagogastroscopy is indicated if negative reports are given by the roentgenologist. Gastritis, superficial ulceration, varices of the esophagus or cardia may be noted among other lesions.

Later, after a careful re-examination by x-ray, esophagogastroscopy and proctoscopy, if the source of the hemorrhage is not now disclosed, and particularly if this is the patient's first hemorrhage, we place the patient on an ambulatory ulcer type diet for a few weeks and await developments. Several of these patients will not bleed again and we do not pursue the study further. If a second bleeding occurs the studies are repeated. If now reports are negative, exploration is considered and probably advised.

We have assumed that the bleeding has subsided. If the hemorrhage does not promptly subside, is massive and no help is obtained from the preliminary survey, exploration is justified. It should not be delayed too long. Even if initially severe, the majority of hemorrhages will subside and permit of more definitive study. We have not been impressed with the "change in prognosis after 45" rule.

TREATMENT

Prolonged hypotension leads to severe anoxemia with resultant serious changes in the brain and medullary centers. These changes may be irreversible. Kidney failure even to oliguria may follow. The adrenals will be injured by prolonged anoxemia. It is not necessary in severe hemorrhage to rapidly restore the blood count and blood pressure to usual levels, but the above complications must be prevented at once. The blood expanders and plasma are of value until blood is available. If a large amount of citrated blood is given, calcium may be inactivated, clotting prevented or tetany noted. *IV* calcium administration will correct this.

We have had little success allowing various diets during bleeding. Cessation of bleeding often will promptly follow allowing *nothing*, not even water, by mouth.

If unable to stabilize the hematocrit and B.P. determinations within several hours, or hemorrhage recurs frequently before full restoration is accomplished, immediate exploration during this phase is indicated.

INCISION MAY BE NECESSARY

For the exploratory examination an adequate incision is essential. The esophageal hiatus, stomach, duodenum, the small and then the large bowel are carefully examined by palpation and visualization; also the biliary tract, pancreas and the mesentery. The stomach or duodenum if blood is therein must be opened adequately to visualize the entire lining if this is necessary. The biliary tract and the pancreas must be visualized adequately. Few cases of active bleeding will escape this search. If exploration is performed after all bleeding has stopped, the same principles of detailed search must be observed.

Subtotal gastric resection is done by many when exploration during an interval bleeding phase fails to reveal the lesion. Successful con-

trol of recurrent hemorrhage has been reported even though the stomach appeared normal at exploration. However, many of these "blind" erosions and similar lesions will be revealed by inspection through a generous gastrostomy. Formidable gastrectomy must not be entered into lightly in the absence of an evident lesion.

If the patient has had a severe hemorrhage from a proved or known peptic ulcer, or has had more than one less severe hemorrhage, surgical attack upon the problem is advised. Usual surgical treatment is advised for polyps, tumors and other lesions found on study.

EXAMPLES OF OBSCURE HEMORRHAGE

Table I is a compilation of some of the more commonly reported cases from the literature. It is of interest that varices may occur about the cardiac stomach as well as in the esophagus. Rendu-Osler disease is a hereditary hemorrhagic telangiectasis involving mucous membrane including the GI tract.

TABLE I

OBSCURE GASTROINTESTINAL HEMORRHAGE: EXAMPLES FROM LITERATURE

Gastric
- Leiomyoma
- Sarcoma
- Fundus Varices
- Gastritis
- Diaphragmatic Hernia

Intestinal
- Meckel's Diverticulum
- Inflammatory Granulomas
- Specific Ulcerations
- Polyps
- Diverticulosis
- Rendu-Osler Disease

Biliary Tract
- Erosion of Cystic Artery
- Trauma to Liver
- Carcinoma

Others
- Carcinoma of Pancreas
- Aneurysm of Aorta
- Leukemia
- Purpura
- Hypertension
- Arteriosclerosis
- Psychogenic

Table II is a compilation of some of the more interesting cases from our own series. In addition to cardiac and fundic varices, minute erosions, even involving submucosal arteries, may defy detection unless the stomach is opened widely enough to fully visualize the lining The x-ray will usually suggest possible ulcers within the herniated stomach.

TABLE II

OBSCURE GASTROINTESTINAL HEMORRHAGE: EXAMPLES FROM WHITTAKER-HART SERIES

- Fundic Stomach Erosions
- Diaphragmatic Hernia
- Localized Duodenitis
- Carcinoma of Duodenum
- Carcinoma of Jejunum
- Carcinoma of Pancreas
- Mesenteric Thrombosis
- Telangiectasis of Intestine
- Meckel's Diverticulum with Gastric Ulcer

A 54-year-old man had repeated small hemorrhages with repeated x-ray studies showing a diaphragmatic hernia but no intrinsic gastric lesion. At operation we could find only edema of the fundus. Following repair of his diaphragmatic hernia no further bleeding occurred.

The localized duodenitis was found at exploration after a series of hemorrhages in a girl of 23 over a 4-year period. Repeated x-ray studies were normal. The duodenum was opened. An area 1.5 cm. in diameter was granular and bled on contact. It was excised. The pathologist reported duodenitis — no ulcer. There has been no further bleeding in 9 years.

A man, aged 39, had repeated tarry stools and x-ray studies suggested an anomaly of the transverse duodenum. Exploration revealed a polypoid carcinoma of the transverse duodenum.

Carcinoma of the pancreas must be remembered. A man, aged 72, in obvious decline, had normal GI x-ray studies. He was later admitted to the hospital in shock from hemorrhage with coffee - ground vomiting and melena. The autopsy revealed a carcinoma of the pancreas with invasion of the duodenum and erosion of the pancreatico-duodenal artery.

Mesenteric vascular occlusion is usually suggested by related disease but may occur without evident cause and without suggestive history. We had one such case in a laboring man, age 28.

The case of telangiectasis of the small bowel was associated with large mesenteric and subserosal veins. It was not Rendu-Osler disease. It occurred in a farmer, aged 23. Bleeding episodes always followed heavy work or other strain. Repeated x-ray and laboratory studies were negative. Biopsy of the mucous membrane at exploration revealed only hyperplastic mucous membrane. The lesions may have represented multiple small arteriovenous aneurysms.

A boy, aged 11, had two very severe GI hemorrhages elsewhere with bright blood by rectum and by mouth. Repeated x-ray studies were normal. Exploration revealed a Meckel's diverticulum buried in the small bowel mesentery. A healed superficial ulceration of gastric mucosa was found in the resected diverticulum.

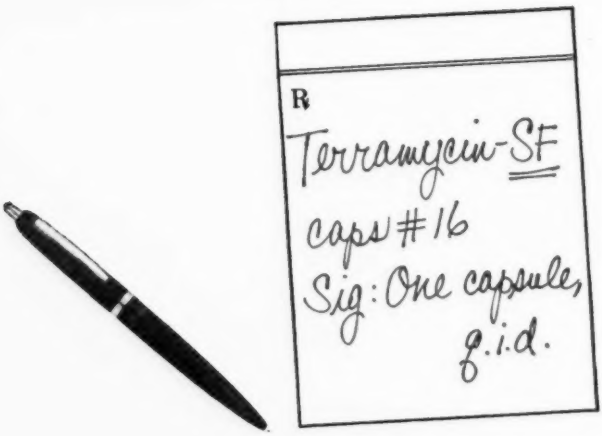
SUMMARY

1. The great majority of cases of GI hemorrhage are diagnosed as to source by routine preliminary history and physical and laboratory examinations, and confirmed by x-ray.
2. There remains a significant group of cases with obscure etiology.
3. Repeated and broadened studies made after bleeding has subsided will reveal the source in many of the obscure cases.
4. Exploration is indicated if recurrent episodes of bleeding occur, or if bleeding does not subside.
5. Principles of surgical treatment are outlined.
6. An orderely study of the patient and a knowledge of possible sources of hemorrhage in obscure cases will contriubte to the successful management of such cases. Representative examples of obscure bleeding are listed to this end.

Ring Sunk in Finger

Soak gauze in a solution of 10% cocaine and 1 in 1,000 liquor adrenalin; apply to the edematous part of the finger; apply a bandage; leave on for 10 to 15 minutes. The ring can now be manipulated easily over the finger, which has lost most of its edema. This method was also found most effective in paraphimosis.

A. J. Ambrose, *British M. J.*, No. 4890:757, 1954.



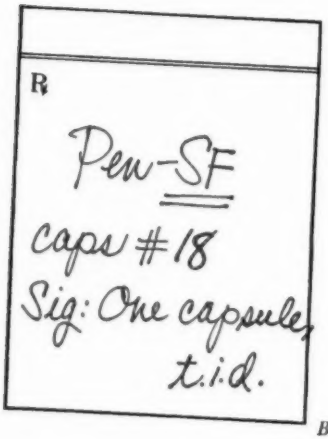
When you specify the Pfizer antibiotic of your choice *Stress Fortified* with the B-complex, C and K vitamins recommended by the National Research Council, be sure to write **SF** on your prescription

The minimum daily dose of each antibiotic *(1 Gm. of Terramycin or Tetracyn, or 600,000 units of penicillin)* **Stress Fortifies the patient** *with the stress vitamin formula* **recommended by the National Research Council:**

Ascorbic acid, U.S.P.	300 mg.	Calcium pantothenate	20 mg.
Thiamine mononitrate	10 mg.	Vitamin B_{12} activity	4 mcg.
Riboflavin	10 mg.	Folic acid	1.5 mg.
Niacinamide	100 mg.	Menadione	
Pyridoxine hydrochloride	2 mg.	(vitamin K analog)	2 mg.

Pfizer

PFIZER LABORATORIES, *Division, Chas. Pfizer & Co., Inc.*, Brooklyn 6, N.Y.



antibiotics *Stress Fortified* with vitamins include:

®Terramycin-SF
Brand of oxytetracycline with vitamins
CAPSULES 250 mg.

®Tetracyn-SF
Brand of tetracycline with vitamins
CAPSULES 250 mg.
ORAL SUSPENSION (fruit flavored)
125 mg./5 cc. teaspoonful

Pen-SF*
Brand of penicillin G potassium with vitamins
CAPSULES 200,000 units

**Trademark*

for your tense peptic ulcer patients

new
ANTRENYL®-PHENOBARBITAL

depresses... ...gastrointestinal motility

...gastric acid secretion

...nervousness and irritability so common in the ulcer diathesis

SUPPLIED: Antrenyl-Phenobarbital Tablets (scored), each tablet containing 5 mg. Antrenyl and 15 mg. phenobarbital.

Other forms: Tablets, 5 mg. Syrup, 5 mg. per 4-ml. teaspoonful. Pediatric Drops, 1 mg. per drop.

Antrenyl® bromide (oxyphenonium bromide CIBA)

2/2059M

Burns—A Plan for Therapy

Fluids must be replaced, infection prevented, skin cover provided and contractures avoided; grafting techniques and proper therapy prevent disability

MERTON L. GRISWOLD, JR., M.D., *Plainfield, New Jersey*

The National Safety Council has rated burns as the third most common cause of accidental death, surpassed only by those due to motor vehicles and falls. This does not take into account the long term disability of the survivor of an extensive surface burn.

We have analyzed 98 burns in one general hospital in the past 3 years, all managed by a program drawn up in advance, subject to modification as experience dictated.

INITIAL TREATMENT

Burn treatment begins with the first individual who is able to render aid. It is important to estimate the total surface involved, which can readily be done by using some such scale as the "Rules of Nine" (Fig. I). Minor burns, manifested by erythema with a few blisters over a small area, need only some type of covering to lessen pain and keep the area free of contamination. After washing lightly with warm, soapy water, the area is covered with fine-mesh vaseline gauze and bandaged in place. The dressing can be left in place for 48 hours and then removed daily for redressing. If there is a tendency to stick, the whole dressing can be floated off with a bath of soapy water. The grease-gauze dressing should only be used when the patient is not hospitalized.

If there is any doubt as to the severity of the burn, transport to hospital is to be made, the patient being first wrapped, as he is, in a

Particularly in Pediatrics

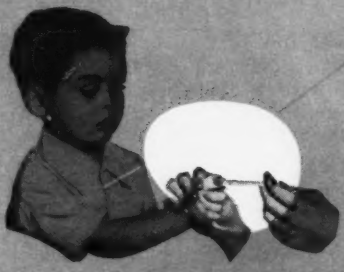
—When Oral Medication is Difficult

Busy mothers welcome your prescription of Numotizine for the many and varied conditions to which the younger set is heir—such painful, sleep-interrupting conditions as—

Sore throat, Tonsillitis, Pharyngitis,
Inflammatory chest conditions,
Sprains, Strains, Boils, Contusions

NUMOTIZINE®

Prescription Cataplasm



—provides relief for eight hours or longer on a single application—permitting the child to sleep throughout the night.

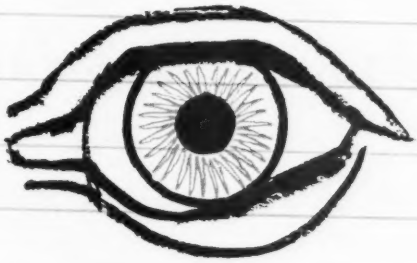
Employed adjunctively to the use of antibiotics and chemotherapeutic agents, Numotizine keeps the patient comfortable while the disease process is under attack.

Numotizine combines decongestive and analgesic actions—reduces swelling, relieves pain, increases local circulation. Easy to apply and remove.

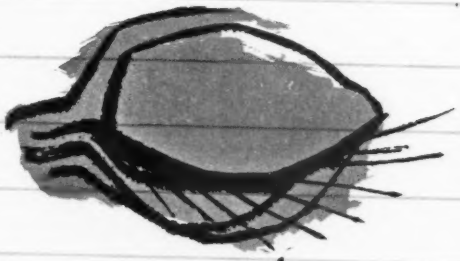
Supplied: 4, 8, 15 and 30-oz. jars.

HOBART LABORATORIES, Inc.
Chicago 10, Illinois, U.S.A.

Noludar 'Roche'



for daytime tension



and nervous insomnia

NOT A BARBITURATE

for daytime tension and nervous insomnia

You can now prescribe Noludar 'Roche' -- a new, mild sedative-hypnotic which is not a barbiturate. Tests in over 3000 patients have confirmed the clinical value of Noludar[T.M.] (3,3-diethyl-5-methyl-2,4-piperidinedione).

NOT A BARBITURATE

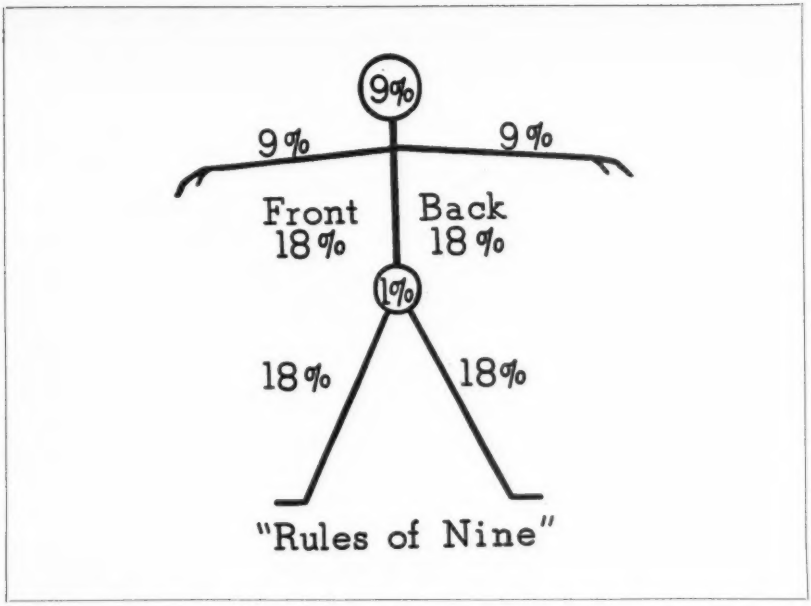


FIGURE 1

clean sheet and covered with blankets.

Upon arrival at the hospital, first concern is with primary shock. Low blood pressure, cyanosis, rapid pulse, disorientation or chill call for supportive treatment with *IV* fluids.

FLUID REPLACEMENT

We usually resolve our fluid replacement problem, for good-and-all, by a cut down to the internal saphenous vein at the ankle and insertion of a polyethylene catheter to insure continuous fluid replacement for at least 48 hours, possibly a week if needed. We have given up plasma as fluid replacement because our patients have responded better to lactated Ringer's solution (Hartman's solution) as suggested by Moyer[1]. The type of replacement fluid is not a settled issue, but our experience tends to put us in that group called the "salt and blood" school. Experimental evidence[2] in dogs in which blood volume has been lowered by increased capillary permeability, indicates that plasma expanders and plasma disappear rapidly into the tissue spaces, and so support the intravascular volume for only a short period.

This fluid passed into the damaged tissues must at some period be reabsorbed into the circulation. When this happens the strain on the circulation is excessive, may be enough to cause fatal pulmonary edema.

All patients are given freely a cold buffered salt solution by mouth. This solution is usually well liked and tolerated, and can be made at the bedside by dissolving 4 tablets of salt (1 gram each) and 6 sodium bicarbonate (0.3 gram each) in a quart of water. A squeeze of lemon

1. Moyer, Carl: *West. J. Surg.*, 62: 39-51 and 107-120, 1954.

2. Davis, et al.: Reported at the 40th Clinical Congress. of Am. Col. of Surg., 1954.

juice is added for further palatability.

How much fluid intake should a patient with a 20% total surface burn have in the first few days? At least 5,000 cc. daily intake by mouth if possible; if not we step up the *IV* intake with alternating bottles of glucose and saline. In many cases 7 or 8 thousand cc. of fluid are needed in a 24-hour period and it is advisable to include some blood in this total for the replacement of hemolyzed red blood cells.

On the second and third post-burn days damaged tissue swelling is maximum. Unless the intravascular fluid volume is maintained, circulatory collapse is an ever-present danger. A cardinal sign is disorientation or a sudden rise in temperature. The amount of venous return to the heart is a reliable index of blood volume and tissue dehydration. The venous pressure may be reduced almost to zero. Hold the hand or the foot out at the level of the right auricle, *after* the veins have been allowed to fill by lowering the extremity. If the veins collapse there is need of increased blood volume. Raise the extremity further; if the veins remain distended the condition is one of congestion and no fluid is indicated. It is unnecessary to make any involved studies. Children are especially liable to sudden collapse. A burn toxin has never been demonstrated; it seems more likely that death in the first week is attributable to electrolytic imbalance.

ADRENAL EXTRACTS

It has not been proved to our satisfaction that cortisone, ACTH, etc. are of any assistance in the regrowth of epithelium. They may possibly be of value in the shock phase. We have used anti-histaminics for some of the series. Further trial is necessary to determine their value.

LOCAL CARE

On burn surface we do not use any grease gauze. If the surface is dry we cover it with sterile dry towels and tie them in place with bandage strips. If the burn extends entirely around the trunk, wet, infected areas are in contact with the bed sheets and it is more practical to lay saline - moistened towels over pliofilm on the surface of the bed. The theory that pressure dressings prevent loss of serum has not worked out well in practice. If they *are* used emphasis should be placed on their absorptive capacity rather than their ability to produce pressure. Limbs should be elevated to encourage drainage from the injured limb; a pillow or some type of sling can be utilized.

SEDATION

In a full-thickness skin burn, pain is not usually a factor. Needed sedatives had best be given *IV* as absorption from the capillary bed is uncertain. Demerol 40 mgm. is a suggested intravenous dose initially for a 130-lb. person.

PROGNOSIS

In some types of burn we can not say whether the full thickness of skin is involved. A dead-white area with some char generally means full-thickness burn and eventual grafting. Testing for anesthesia by pricking the skin with a pin is helpful if the patient can cooperate, but viability and the depth of pain sensibility are not always at the same level. The common scald seen so often in children from an overturned vessel, is usually a deep type of superficial burn and will epithelialize in 17-21 days without grafting. If the upper portion of the body is involved the febrile reaction of the first few days is much more violent than when the lower extremities are involved.

LABORATORY DATA

The urine output is usually very low for 48 hours with a high specific gravity. This is due to a contraction of blood volume and is no contraindication to the administration of saline and other fluids. The hematocrit, red cell count and hemoglobin are elevated. If laboratory data are not readily available we consider the hemoglobin the best index. From the 4th day on anemia may call for additional blood replacement.

PREPARATION FOR GRAFTING

When it becomes evident that there is going to be full thickness skin loss, ordinary surgical draping towels are moistened with saline 4 times a day and laid over the burned skin. They are changed completely daily. The debriding wet towels are kept wet and are covered with pliofilm. Changing these towels requires a little time and with each change some epithelial debris comes away. This method gives opportunity to observe the burn area daily and determine how much full-thickness skin loss we have to deal with. If the hands are involved, they are enclosed in a towel wet with saline and covered with pliofilm from discarded oxygen tents. We have had some near disasters, due to circutory constriction, following the application of grease gauze to the individual fingers, drying of the serous exudate having converted them to finger casts.

Loose segments of skin are removed daily at the bedside with scalpel or scissors. We do not do debridement under anesthesia. If the dressings show contamination from B. pyocyaneus (a green stain), we switch the moistening medium to a broad spectrum antibiotic such as chlortetracycline (1 mg. to 1 cc. water). This also lessens the odor and the amount of purulent discharge. By these methods we are usually able to obtain a granulating surface suitable for grafting somewhere between the 14th and 21st day.

GRAFTING TECHNIQUE

If the denuded surface is large we are confronted with the task of covering it with grafts as soon as possible. All areas may not be free of slough but, to minimize fluid loss, the denuded surfaces can be grafted and the remaining portions done in stages. Grafts from the patient's own body are best. If he has not sufficient intact skin to carry this plan out, resort to homografts must be considered. The immediate take of the homografts is usually satisfactory but in 3 to 5 weeks they undergo dissolution, and must be replaced from the patient. The homografts do give us a breathing space and may be lifesaving. Brown[3] has suggested the use of postmortem homografts, cut with a sterile set-up, but we have found them difficult to get and they, of course, have no lasting qualities. We have tried amniotic membrane fresh from the delivery room, but have had no sccessful "takes."

Autografts must be removed as thin sheets (10 to 14 thousands of an inch) to insure a take and also to insure quick regeneration of the donor sites. We can usually re-use the donor sites in 10 days. A dermatome utilizing a tape backing saves time in the operating room. The skin strips do not need smoothing out and can be cut into any desired size. For a surface such as the chest, grafts the size of postage stamps are the more practical, because movements tend to dislodge the grafts, and loss of a small one is not of great consideration. Also many small grafts present a greater peripheral area of epithelial regenera-

3. Brown, et al.: *J.A.M.A.*, 156: 12, 1163, 1954.

tion. We cover the entire denuded surface if small.

Grafts may be fixed in position with sterilized strips of elastoplast, or by simply laying on rolls of multithickness gauze bandage which has been soaked in an antibiotic solution. The pliofilm layer is placed on top and removed at 6-hour intervals to allow moistening of the gauze.

For the donor site, we like the type of plastic strips to which a layer of cotton is affixed. They absorb blood and secretions well, and do not adhere to the raw surface on removal a few days later, when if the site is not entirely healed they can be replaced for 4 or 5 days.

Postoperatively usually all dressings are removed after 4 days. The tape backing of the grafts usually comes away readily with the use of forceps and if there are raw areas remaining, further moistened dressings are applied.

In the circumferential type of burn, some type of revolving bed, on the principle of the Bradford frame, is of value in post operative nursing care. Dressings are readily changed and its use reduces the incidence of decubitus ulcers by allowing complete turning of the patient at intervals of 3 to 5 hours.

ANESTHESIA

Endotracheal anesthesia is the preferred type. Patients with chest and neck burns will present some difficulty in passing an endotracheal tube, as the mouth cannot be opened widely nor the head dorsiflexed. It is of great assistance to the anesthetist if the trachea is depressed externally by an assistant while passing a tube.

On one occasion, after an attempted passage of the endotracheal tube in a patient with extensive neck burns, respirations ceased. A tracheostomy set was immediately available and an opening was made in the infrahyoid region of the trachea. Respiration cycle was reestablished with a lapse of 4 minutes. There was no cessation of the pulse beat and the patient rallied without complications. The tracheostomy opening had to be made through damaged edematous tissue and considerable hemorrhage occurred. Post - operatively, seepage of exudate into the tracheal fistula made frequent aspiration necessary. The tube was removed in 10 days and, following collapse of the fistulous opening, a split graft was placed over the suprasternal space.

After the large-scale grafting has been done, lesser graftings may be done under local anesthesia. We have removed as many as 3 dermatome drums of skin using procaine infiltration. The patient loses no meals, quite a factor in their usual state of debilitation.

PREVENT COMPLICATIONS

A Foley catheter in the bladder prevents contamination of surfaces near the perineum and allows accurate measurement of urine.

Contractures at the elbow are readily treated with a padded basswood splint placed over the pliofilm and held with elastic bandage. A board at the foot of the bed will assist in keeping the long axis of the foot at right angles to the leg, thus preventing footdrop. In the rehabilitation period, tube baths are invaluable to hasten the movements of extremities.

BACTERIOLOGY

Skin will not take unless there is a reasonable clean granulating surface. The commonest bacterial contaminant is Staph. aureus. The hemolytic forms of staph. or strep. are found occasionally. The appearance of the wound and the febrile course are more reliable guides in determining the best time for graft-

ing than are swab cultures.

Local, broad-spectrum, antibiotic solutions will usually keep the infection in bounds. Occasionally it may be advantageous to expose the granulating surface to the open air for short periods. In this manner the anerobic organisms are "rocked" first by moisture and then by drying. By weight 80% of the bacterial cell consists of water, and without water they cannot flourish. Darkness is also a factor in bacterial multiplication, and the bacteriostatic effect of ultra violet rays is well established. We are not convinced that systemic antibiotics combat the bacterial growth on the wound surface. If blood cultures are positive for bacterial growth, the type of antibiotic is readily determined in the laboratory. Children tend to run a febrile course with burns not very extensive. Our conception of the cause is dehydration rather than infection, and we administer additional fluids either by hypodermoclysis or by vein.

BURN PREVENTION

Every effort should be made by doctors to alert the public to the prevention of burns. We pay too little attention to the inflammability of clothes. Wool and nylon, orlon, etc., are fire resistant; rayon, cotton and linen, are not at all fire resistant. Almost one-half of our burns occurred in children who were wearing clothes difficult to remove and composed of quite inflammable material. Our most extensive full-thickness burn (60%, which was survived, was that of a person dressed in a cotton undershirt and shirt. There were no burned areas below the top of woolen trousers. Smoking in bed is a leading cause of burns. Those addicted to the habit should use non-inflammable clothing —personal and bed.

SUMMARY

A coordinated regimen has been presented for the treatment of the burn patient. No panacea for all the therapeutic problems presented by burns is revealed.

The ultimate aim for any denuded surface is to cover it with viable skin as soon as possible. If our mortality and morbidity is to be reduced, vigorous measures must be undertaken to replace fluids, to prevent infection, to provide skin cover and prevent contractures. Nothing short of loss of life necessarily prevents the return of the burn patient to a useful status in society.

Site of Smallpox Vaccination

The back between the scapulas is being used in our pre-school-age vaccination program, because this is the only spot on the body that cannot be reached by scratching fingers. The children in this group are 6 months to 6 years of age. We use 3 light corneum punctures; the rate of take is poorer but the lesions are smaller and there is less scarring. Revaccination of a few children in whom this does not take is less of a problem that facing the parents of a child who is severely ill from a supposedly safe procedure.

R. L. McKinley, *J.A.M.A.*, 156:1636, 1954

FIRST REPORT

The spotlight of research is being turned on Lecithin —a natural phospholipid

Physiologic Role of Phospholipids

Phospholipids or phosphatides (lecithin, cephalin, sphingomyelin) are eliciting increased interest in medicine because they apparently are intimately connected with fat metabolism, and especially the transport of lipids in the blood. They are considered to function as emulsifying agents and stabilizers for fat and fat-like substances, such as cholesterol, in the blood serum.

How vital this function is will be evident from a view generally held by investigators that instability of the lipids in the serum-lipid emulsion is one of the most important contributing causes of atheromatous deposits in vessel walls.

An excellent source of lecithin is Glidden's "RG" Oil-free Soya Lecithin, a highly purified extract containing a minimum of 95% phospholipids. It is packed in a specially designed 8 oz container to maintain its purity and freshness and is available at your drugstore.

Dosage: Investigators of lecithin have used quantities from 7.5 to 30 grams daily in divided doses. (3 teaspoonfuls equal 7.5 grams.)

Administration: "RG" Lecithin is presented in palatable granules which may be taken plain, in milk, or sprinkled on cereal.

Literature available on request.

Bibliography: 1. Duff, G. L., and Payne, T. P. B.: J. Exper. Med. 92:299, (Oct. 1) 1950. • Schettler, G.: Klin. Wchnschr. 30:627 (July) 1952. • 3. Gertler, M. M.; Garn, S. M., and Lerman, J.: Circulation 2:205 (Aug.) 1950. • 4. Ahrens, E. H., and Kunkel, H. G.: J. Exper. Med. 90:409 (Nov. 1) 1949. • 5. Boyd, E. M.: Proc. & Trans. Roy. Soc. Canada 31:11 (May) 1937. • 6. Gertler, M. M., and Oppenheimer, B. S.: Geriatrics 9:157 (April) 1954. • 7. Kellner, A.; Correll, J. W., and Ladd, A. T.: J. Exper. Med. 93:385 (April 1) 1951.

GLIDDEN RG® LECITHIN

THE GLIDDEN COMPANY • CHEMURGY DIVISION
1825 North Laramie Avenue, Chicago 39, Illinois

Glidden

The Skin, The Eye and The Mouth

A discussion of the significance of pigmentation of the skin, lesions, eye and mouth irregularities and enlarged tongue

JOHN GODWIN DOWNING, M.D., *Boston, Massachusetts*

The expression "a picture of health" is stimulated by the appearance of an individual who apparently is free from internal disease and is tranquil emotionally. Although a person may present this appearance and still have a serious disease, usually if he looks well, he feels well. The skin may reveal the purplish flush of anger, the pallid reaction of fear, the moist clammy skin of anxiety, the strained expression of worry, the itching reflex of tension, and the excoriated skin of guilt or hostility.

The doctor must consider why his patient's skin flushes so readily, why he perspires so freely or itches without apparent cause; also, why he mutilates himself. A delusion of infestation with parasites may be the first symptom of a severe mental illness. A cutaneous change is often the first manifestation of a systemic disease; however, even this sign may be preceded by lesions in the eye or mouth. To the trained observer these areas present many clues. One may be excused for not knowing, but not for not looking.

From casual observation of the skin one notes whether it is pallid, flushed, abnormally pigmented, or depigmented. Recognition of the cold sweat of a patient in shock or a coronary crisis may be a life-saving observation. The sudden change in the appearance of a patient receiving ACTH or Cortisone to the Hippocratic facies should suggest general peritonitis, because these drugs tend to mask intestinal infec-

tion.

An unusual growth of hair in a female may be due to a hormonal abnormality, and is now seen in patients taking steroids over a long period of time. Hypertrichosis in the female develops in hypercorticordism as a result of a benign or malignant tumor, pituitary hyperfunction, or adrenocortical hyperplasia. Arrhenoblastoma may cause an extreme hirsutism of ovarian origin. An increase of facial hair frequently occurs after the menopause. Therapy with all the hormones that stimulate androgenic substances causes hypertrichosis in women.

Hands are most revealing. Excessive sweating of the palms, with flushing and tremor, is seen in tension and hyperthyroidism; cold, dry hands in the myxedematous patient; tremor in neurocirculatory asthenia and Parkinson's disease. In the latter it is an early clue. Cyanosis and clubbing of the fingers characterizes congenital heart disease. Large, tapering fingers should suggest a chest x-ray of a woman with a malar flush.

The color of the skin is determined by the amount and location of the cutaneous pigment present. This is due mainly to melanin. If superficial. it is brown; if below the epidermis, slate-gray or bluish. Carotene, melanoid, reduced hemoglobin, and oxyhemoglobin, however, contribute their share of color. The bright-red appearance of victims of cyanide poisoning is rarely forgotten; neither is the purplish color resulting from too large a dose of acetanilide. Brownish pigmentation of the skin is seen in several intestinal disorders such as ulcerative colitis, sprue, and Whipple's disease. A bluish-gray discoloration (ochronosis) of the ears is seen in alkaptonuria, a condition in which the urine turns black when left standing. A grayish hue of the skin may be due to exposure to various silver salts. In hemochromatosis or bronze diabetes, the skin is dry, slightly scaly, and diffusely pigmented, especially on the face, arms and legs. The color varies from a bluish-brown to a very deep bronze, and is somewhat patchy. The pigment is composed of hemosiderin and hemofuscin. Hyperpigmentation of Addison's disease is more marked on areas normally pigmented and at the sites of friction or pressure.

PIGMENTATION OFTEN SIGNIFICANT

Pigmentation of the hands in Addison's disease is usually marked, especially at the palmar creases. A yellow staining of these creases may be the first sign of a familial hyperlipemia. There is marked yellow discoloration of the palms in carotenemia, which can be distinguished from jaundice by its absence from the sclerae. A greenish yellow staining of the dorsa of the hands is seen in atabrine poisoning. This likewise does not involve the sclerae. A peculiar waxy-yellow involves the hands of patients with myxedema. A ruddy cyanosis of the distal phalanges of the fingers and toes suggests arteriosclerosis in obesity, diabetes and gout.

Palmar erythema may be familial, but often is seen with liver disease. Spider angioma of the palms and elsewhere is seen in liver diseases and occasionally in pregnancy. White fingernails are sometimes seen in cirrhosis of the liver. Spoon nails may develop in anemic old women who also show a smooth, shiny tongue, with fissuring at the corners of the mouth. A pallor of the palms may reveal an anemia before it appears on the mucous membranes or the conjunctives. Petechial spots, purplish tender macules and nodules on the fingerpads, thenar, and hypothenar eminences are seen in endocarditis. In children, an intense pink color and tenderness of the

hands and feet are due to a possible vitamin-deficiency disease, acrodynia, or mercury poisoning. The reddish brown scaling of the dorsa of the hands in patients with glossitis and painful ulcerations at the oral commissures and on the tongue establishes the diagnosis of pellagra, or pellagroid, in alcoholic persons. Blisters often appear on the dorsa of the hands.

CERTAIN SYNDROMES REVEALED

The skin, the eyes, and the mouth reveal certain syndromes. In Steven-Johnson's disease there is a general cutaneous eruption starting with macules, then papules, and finally vesicles or bullae. A purulent conjunctivitis occurs with corneal ulcerations which may eventually result in blindness. Behcet's disease is an eruption consisting of herpetic lesions in the mouth and on the genitals, and accompanied by an iritis and uveitis. Ectoderma - erosive - pleuro-orificialis consists of a conjunctivitis, an ulcerative stomatitis, and a purpuric eruption involving the genitals and the extremities. Recently I saw a case of Reiter's disease in which the man had a conjunctivitis, stomatitis, urethritis, dermatitis and marked involvement of the joints.

In 1887 Kaposi described a generalized varicelliform eruption due to the virus of herpes simplex, in which there may be a keratitis and vesicular lesions in the mouth. Bullous lesions of the eyes and mouth are found in epidermolysis bullosa, a rare disease starting in infancy in which bullae appear at the site of slight trauma. Shrinking of the conjunctiva usually follows these bullous lesions.

Common in the secondary stage of syphilis are a generalized skin eruption, iritis, and mucous patches in the mouth. The skin lesions of measles are preceded by an acute conjunctivitis, with punctate lesions that stud the corneas and Koplik's spots in the mouth. Herpes zoster is severe when the virus affects the first division of the fifth nerve — frontal, lacrimal, and naso-ciliary. Vision is reduced by vascularization and scarring of the corneas. Iridocyclitis may occur, with or without secondary glaucoma. Herpetic lesions appear in the mouth, and scarring is the usual aftermath of the facial lesions.

PEMPHIGUS LESIONS MAY SHOW FIRST IN THE MOUTH

Pemphigus of the eyes, mouth and skin is a serious disease. Bullous lesions may appear in the eye and mouth long before the general skin is affected. In the eye blindness results from progressive cicatrization and shrinkage of the mucous membranes. Lichen planus may show striae of the conjunctivae, the buccal muccous membranes, and the nasal septum. It may be seen localized on the mouth and tongue. Trichinosis shows swelling of the eyelids, ecchymosis of the conjunctivae, and splinter hemorrhages under the nails. Preretinal hemorrhage with ulcerations, stomatitis and cutaneous nodules are seen in monocytic leukemia. In xanthomatosis from a hyperlipemia, xanthoses are found on the eyelids, the mucous membranes, and the skin. Various sizes and types of nodules are found in lipoid proteonosis. These appear most commonly on the face, and the eyelids present bead-like white papules. There is involvement of the larynx with resulting hoarseness.

SOME AFFECTIONS COMMON TO EYE AND SKIN

The eye and skin have much in common. A persistent blepharitis due to staphylococcus should prompt a search of the scalp and eyelashes for pediculi. This is especially important when the skin eruption is

impetiginous. Serious involvement of the eyelids may accompany ecthyma. Erysipelas of the face may extend to the conjunctivae and corneas with a resulting keratoconjunctivitis. I have seen diphtheria of the eyelids in a man who had an extensive pemphigus with ulceration of the lids. Seborrheic dermatitis usually involves the eyelids, where it is difficult to relieve.

Some of the cutaneous disturbances attributed to vitamin B deficiencies have not responded well to the administering of large doses of Vitamin B; e.g., cutaneous rosacea, cheilitis, stomatitis, and fissures at the angles of the mouth. Despite large doses of riboflavin, the keratitis which frequently accompanies cutaneous rosacea does not respond unless it is treated by local antiseptic applications. The concomitant use of vitamin B complex, however, seems to be of value in hastening the recovery of these patients. Occationally a striking result occurs in stomatitis and cheilitis after large doses of vitamin B complex, and it should be used when anemia and local irritation are ruled out.

A vitamin A deficiency is manifested by characteristic lesions on the skin, together with night blindness and dryness of the corneas and conjunctivae. The first change noticed is severe dryness of the skin.

CONTACT DERMATITIS

Contact dermatitis of the face from cosmetics or other sensitizers generally involves the eyes. In an atopic dermatitis the face and eyelids are usually involved. Keratitis is apt to occur in the various dermatoses due to light sensitivity. A child with the congenital precancerous disease xeroderma pigmentosa, may show photophobia as the first sign; later there is ulceration of the eye structure, followed by atrophy and ectropion. Vernal catarrh occurs in hydroa vacciniforme, a recurrent cutaneous disorder seen in children, especially in the spring, due to sunlight. It is characterized by vesicles involving the central part of the face. Retinal hemorrhages may be seen in torulosis. Monilial infection may be present on the eyelids, about the mouth, and the anus of children with the rare disease acrodermatitis enteropathica. They also have total alopecia, and die before puberty from a persistent diarrhea. Verruca vulgaris and molluscum contagiosa may involve the corneas.

Destruction of the eyelids is frequently seen in tuberculosis of the skin. Often it is difficult to differentiate erysipelas of the orbit from anthrax. In the latter, the absence of pain and the sharp line of demarcation without suppuration may suggest smears and cultures of the lesion for the bacillus of anthrax. Conjunctival and subungual hemorrhages are seen in trichinosis. Ectropion is seen in severe ichthyosis, with heavy scaling and loss of cilia. Tularemia may be present on the conjunctivae yellowish ulcerations on brilliant red bases. In sarcoidosis a uveo-parotid fever with paralysis of the cranial nerves, especially the seventh, may be seen, accompanied by nodular lesions on the skin. Nodular lesions of the lids may accompany erythema nodosa. I recently saw a woman suffering from dermatitis herpetiformis who had opacities of the corneas.

NEW SYNDROMES

Several new syndromes have been recognized by the ophthalmologists. The combination of uveitis, associated with alopecia, poliosis, vitiligo, and deafness, is called the Voyt-Koyangi syndrome. The loss of hair appears weeks after the uveitis. A similar syndrome which also included retinal detachment was described by Harada. Sarcoidosis is fre-

quently accompanied by uveitis, and poliosis may be seen in sympathetic ophthalmia. Oliver recently reported a syndrome of nonsyphilitic interstitial keratitis with deafness associated with essential polyangitis (periarteritis nodosa). There were tender nodular lesions on the extremities. Defective lacrimation, skin blotching, and excessive perspiration in a Jewish child with cyclic vomiting may suggest the diagnosis of the Riley-Day syndrome, a familial autonomic dysfunction.

Horner's syndrome, sinking of the eyeball, drooping of the upper eyelid, constriction of the pupil, narrowing of the palpebral fissure and excessive sweating of the face, has been seen after cervical sympathectomy. Cataracts may be found in cases of severe atopic dermatitis. They are also seen in the Rothmund syndrome, in oldish-appearing children with atrophy and ulceration of the skin of the lower extremities. Bourneville's disease includes a nodular rash (adenoma sebaceum) on the face, grayish-white tumors of the fundi, and epilepsy, with mental and neurologic symptoms. In neurofibromatosis, moles, cafe-au-lait spots, multiple pedunculated or flat tumors are present on the skin. In the ciliary nerves, the sclera, cornea, uvea, and optic nerves, there may be neurinomatosis changes and tumors of the retina. Sturge-Weber's disease presents a nevus flammeus of the face, glaucoma, epilepsy, and neurologic disturbances. Calcification of the meningeal small vessels is a characteristic sign. Examination of the fundus, which shows a striated exudate, may suggest the diagnosis of acute disseminated lupus erythematosus before any skin lesions appear.

Discoloration of the mouth may be first seen by the dentist. A bluish-black pigmentation is seen in patients receiving bismuth. It is more diffusely distributed than in lead poisoning. Argyria may be first noted in the mouth before the skin assumes the slate-gray color. It is scattered widely over the oral mucous membrane, and can be distinguished from the dirty-brown spots and streaks of Addison's disease. Round or oval smooth patches of dark-brown pigment on the lips, gums, hard palate, and tongue are seen in patients with generalized intestinal polyposis, Jegher's syndrome.

FUNGUS DISEASES

Fungus diseases occur more often in the mouth than in the eye. Actinomycosis is rare, but a violaceous tumefaction subsequent to extraction of a tooth should suggest the disease, especially if a persistent sinus disease results from the breaking down of this growth. After syphilis, tuberculosis and cancer have been ruled out, smears from a granulomatous lesion of the oral cavity may show the budding yeast cells of blastomycosis. Monilial infections are fairly common in these days of antibiotic therapy. They are usually accompanied by a dermatitis of the scrotum and anus, and are relieved by large doses of nicotinic acid. The white membranous lesions of thrust are seen in children and adults; in infants such lesions may be serious. They may be the initial sign of infectious mononucleosis.

ENLARGED TONGUE

A symmetrical enlargement of the tongue may be an early sign of systemic amyloidosis. Acute macroglossia is seen in angioneurotic edema. A chronic congenital type is seen in cretins, mongoloids, and persons with congenital syphilis, lymphangioma and hemangioma. A purplish-red tongue is seen in polycythemia vera. Atrophy of the

tongue occurs in pernicious anemia, pellagra, sprue, and various intestinal disorders. Marked dental aplasia is seen in children with a congenital ectodermal defect, in which there is heat intolerance and absence of sweat glands and pilosebaceous glands. This disease was described 50 years ago by a dentist named Guilford.

To repeat, there is an excuse for not knowing, but no excuse for not looking. A small hand lens, an ophthalmoscope, and the usual mechanical aids for examining mucous membranes, should reveal a great deal to the interested observe. Putting together the presenting signs should be like grouping the parts of a picture puzzle. When assembled, they suggest a diagnosis that is startling to even the trained specialist. Nowadays it can easily be corroborated by the extensive literature and tests that are available to practically every physician. During my teaching years, while puzzling over a group of physical signs present on the skin, eyes, and mucous membranes, I have been startled when some third-year student has blurted out that he had seen such a syndrome described in the recent literature. Careful observation makes the practice of medicine a truly interesting study, more fascinating than the everyday detective story.

Infant Mortality

Survival of the new-born is a problem that can be solved by better understanding and knowledge of prompt treatment

W. D. HAWKER, M.D.,* *St. Louis, Missouri*

The national mortality rate for infants under one year of age has fallen from 100 in 1915 to 28.6 per thousand live births in 1952. Up until a few years ago studies in all cities showed that though the overall death rate was being lowered there was one portion of this rate which remained stable. These deaths in the first 24 hours of life, have since shown a drop in a few cities that are actively attacking the problem. Their gratifying results serve as an incentive for all other areas in the nation. To further arouse interest in this subject and stimulate more effort to the solution of this problem is the purpose of this article.

* From the Department of Obstetrics and Gynecology, Washington University School of Medicine.

A small percentage of all infant deaths are obviously preventable. In general this figure is about 10%. Among the reasons are lack of prenatal care; failure to seek medical aid promptly; carelessness of the parents; infanticide, and other factors related to the physician's care.

It is not in this small group where most of the good work can be done. The other 90% of the infant deaths not usually listed as preventable, is where a well planned program will reap the results.

The major cause of death in this large group is prematurity: other causes are erythroblastosis, interference with fetal circulation due to placental accidents, trauma and toxemia. It is possible to lower the infant death rate through the more

widespread use of certain therapeutic regimen in the various causes of death.

The treatment of the acute infectious diseases has advanced today where most of the improvement can be obtained by earlier calling of the doctor by the parents, more rapid diagnosis and the institution of prompt treatment.

The rapid replacement of blood in the mother with premature separation of the placenta, with earlier diagnosis of the condition while the baby is still alive, will help in reducing the fetal mortality. Though we are told that conservative therapy is to be preferred, one cannot help but believe that the trend of treatment of premature separation of the placenta in the future will be toward more prompt delivery and that our salvage in this group will be improved.

The abolishment of the use of the Voorhees bag and podalic versions, and the increase in the use of Cesarian section have lowered infant death rate in pregnancies complicated by placenta previa. The more general use of replacement blood in the undelivered mother with placenta previa may further lower this rate. The proper time for the section must be chosen; performed too early in the pregnancy it results in another premature. Few women with placenta previa have been lost from the first hemorrhage.

The need for transfusions of the newborn baby of a mother with vasa previa or in placenta previa cesaria where delivery was slow cannot be overlooked, for posthemorrhagic shock is the preventable cause of death of some newborns.

The intrapartum stillborn rate resulting from toxemia of pregnancy can only be lowered as a knowledge of the cause and the best method of treatment is gained. Other placental accidents such as infarcts can be reduced with increase of knowledge of placental physiology and pathology.

The anticipation of erythroblastosis before birth through antibody titre determinations, replacement transfusions and expert pediatric observation after birth.

A better understanding of the indications for and the optimal time for operative delivery, along with improved skill of the operator, will result in a general lowering of that part of the mortality rate due to obstetric trauma.

PREVENTION OF PREMATURITY

Premature birth still ranks as the leading cause of infant death in the United States. It accounts for more than a third of all deaths during the first year of life. More stress on preventing premature births must be made in the medical schools. Any measure which may help should be used by all doctors with obstetric practices. The preventable causes of prematurity are toxemia, some cases of placenta previa, heart disease, malnutrition, infectious diseases, syphilis and the habitual abortion. A suggested preventive regimen would include:

1. The prompt treatment of colds and infectious diseases of the pregnant woman.

2. Close attention to women with a history of frequent non-viable pregnancies. Here bed rest, avoidance of long trips, abstinence from sexual excesses and possibly administration of estrogens, progesterone, vitamins and sedatives. Multiple pregnancies deserve the same vigilant treatment.

3. The early detection of toxemia through frequent prenatal visits and its prompt treatment with bed rest and sedatives, or hospitalization, is most important.

4. In general good nutrition, correction of anemias and postponement of elective surgery in the grav

id woman should help, for there is proof that dietary deficiencies play a role in the etiology.

5. The importance of adequate prenatal care is to be strongly emphasized. In some states (New Mexico - 78/1000) the infant mortality rate is still very high, in rural districts higher than in urban. This is due mainly to poor sanitary conditions, crowded quarters, babies being born in the home and a lack of medical attendance.

THE CORRECT MANAGEMENT OF THE WOMAN IN PREMATURE LABOR

1. Sedatives, and especially morphine in doses large enough to halt established premature labor are to be avoided.

2. Anesthesia should be restricted to the regional type, except in those few cases where the rapid labor does not allow us adequate time. Then employ only those inhalation anesthetics that utilize high oxygen concentrations. There is a great need for trained anesthetists in the delivery rooms.

3. Every physician doing obstetrics should be adequately trained in resuscitative measures. Contrast baths, swinging babies through a wide arc and the administration of large doses of stimulants have no place.

4. The delivery of the premature must be as atraumatic as possible. The use of an adequate episiotomy is imperative. Low forceps in competent hands will protect the head from trauma by maternal tissues.

5. The cord should be clamped only after all pulsations of the umbilical vessels have ceased. Placental suspension and drainage for Cesarian delivered premature babies are to be used.

6. Avoid the use of posterior pituitary extracts to institute the onset or improve the quality of the contractions of premature labor.

Not all hospitals are properly equipped to offer best care. Many lack in personnel and in materiel. Illinois can point with pride to its recently instituted program of centers for the premature throughout the state. A similar system should be set up throughout the nation. Cooperation between government agencies, medical schools and hospitals could produce centers to:

1. Train nurses in modern premature care

2. Train internes

3. Centralize the care of prematures born in outlying urban hospitals.

This centralization of care would allow the pooling of all the specially trained personnel, and result in greater efficiency in the running of the ward, with a resultant lower cost to the patient. The patient-nurse ratio should be no more than six prematures to one nurse.

City and State governments should provide ambulance service for the transportation of the premature to the center, and the ambulance should be equipped with modern incubators and have a trained nurse in attendance.

To send the month-old premature to a home where the mother has not been educated in its proper care will only result in that premature being brought back to the hospital to die at a later date. Most cities at the present date are operating with less than the number of public health nurses recommended. Increasing the public health nurses would enable the Health Departments to carry out a well organized program of:

1. Entering the home and teaching the mother about the proper care needed before the premature is allowed to leave the hospital.

2. Following up the care of the premature after it has been sent home.

More nursing schools should place more emphasis upon this subject in

their classrooms. To their curricula might well be added an externeship of two or three weeks, whereby some practical experience could be obtained by working along with the public health nurse of the Health Departments.

In general our pathologists do not possess the experience and interest to enable them to make the proper interpretation of the changes disclosed by their findings. This nation needs more Edith Potters to fight an uphill battle. Her work in pathology of the fetus and newborn has enabled Chicago to have an autopsy in 85% of all infant deaths.

Today, with this country continuing to enjoy a great boom in babies, the problem of infant mortality should be of concern to all. In his address at the annual meeting of the A.M.A. in June, 1953, Dr. Charles U. Letourneau of the American Hospital Association said, "Survival of the newborn is a matter of national importance. The discrepancy between our birth rate and that of some other nations makes it so. It is imperative that we make every effort to compensate for our low birth rate by keeping infant mortality at a minimum."

The General Practitioner and Cervical Cytology

Aspiration and scraping of the cervical os after a pelvic examination, using a small amount of lubricant, saves much time in the diagnosis

GEORGE M. WILCOXON, B.S., M.S., M.D., *Alliance, Ohio*
LUCIUS F. HERZ, Ph.B., M.D., *New York, New York*
HAROLD T. GOLDEN, M.D., *Herkimer, New York*

In this paper cervical cytology study means study by the Papanicolaou method, the cells having been taken from the uterine cervix by aspiration and cervical scraping at the time of a complete pelvic examination of the patient.

ORDER OF PROCEDURE

For years in the taking of Papanicolaou smears of the cervix, it has been recommended that before any part of the examination is done a speculum be inserted in the vagina and the smear taken. This means the speculum must be removed from the vagina and the vaginal examination completed and then the speculum reinserted in the vagina, if any treatment of the cervix is necessary by the physician.

We complete the vaginal examination and then insert the speculum and take the cervical smear and scraping. This saves considerable time. The real difference is that by using a small amount of lubricant none reaches the cervix.

DIFFERENT LUBRICANTS USED

Most physicians use too much lubricant in doing a vaginal examination, thus making the examination more difficult. It takes time to get used to light lubrication, but once accomplished one is able to better palpate the pelvic organs.

We have discarded the older lubricants and substituted pHisoHex, supplied in a small, easy-to-handle,

plastic, squeeze bottle. Not more than ½ inch of the pHisoHex is squeezed on the index finger of the examining hand, spread around the orifice of the vagina and the index finger inserted. If the vagina will take two fingers the second finger is then inserted.

The bimanual vaginal examination completed, the un-lubricated speculum is inserted. The cervical aspiration and cervical scraping is then done. It makes no differeence whether or not the patient has taken a douche before the examination.

Thus every time a cervical cytology study is mentioned the full meaning is that a complete pelvic examination is done by a physician before the actual taking of the Papanicolaou test. If a woman over 40 years of age has a cervical cytology study every 6 months, the cancer will be recognized early and proper modern treatment started in time to effect a cure in most cases.

PUNCH BIOPSY

The punch biopsy of the uterine cervix is rapidly becoming obsolete because it has been demonstrated over and over that a small area of the cervix can have cancer right next to the punch biopsy area. Even multiple punch biopsies will miss many cancers of the cervix.

McDonald and Dahlin[1] say: "A single properly prepared cervical smear is more accurate in the detection of preclinical carcinoma than is a single conventional biopsy specimen, mainly because the lesion is so often grossly not apparent. Much has been said about the false security given the patient if a cytology study is misinterpreted. How much more false security is given if the very small area of the punch biopsy misses the cancer? The doctor and the patient give the cervix a clean bill of health while the missed cancer goes on its destructive course. An entire circular area of the cervix must be removed and studied, according to Hoffman, Forel and Hahn,[2] to make sure a cancer is not present; so cervical cytology study is much more practical than a punch biopsy of the cervix.

We agree with Barnes and Hendricks that: "A cervix bad enough to cauterize is bad enough to biopsy."[3] We believe that before cauterization of a cervix cytology study should be done and reported on, so that a cervix with positive cells will not be cauterized and a complete diagnosis made if possible.

Routine biopsies of normal appearing cervices not infrequently fail to disclose an existing cancer (Fremont - Smith and Graham.[4]).

GENERAL PRACTITIONERS' USE CERVICAL CYTOLOGY

Many GP's are having cervical cytology studies done on their patients, either sending his patients to a gynecologist for the whole study, or preparing the slides himself and sending them to a laboratory which concentrates on cervical cytology.

It is surprising how many G.P.'s will not do a complete pelvic examination on their women patients. Within the month a patient presented herself who had been going regularly for 5 years to her doctor who had not done this examination even though the patient suggested it. As the patient separated her thighs—there protruding from the vaginal orifice, was the scarred nose of the cervix.

Some GP's are good gynecologists, careful to check the pelvics of their women patients. If the general man does his own office gynecology he may also learn to do his own cytology. There is no great mystery in

1. McDonald, J. R. & Dahlin, D. C.: *Surg., Gynec. & Obst.*, 94: 755-757, 1952.
2. Hoffman, J. et al.: *J.A.M.A.*, 151: 535-540, 1953.
3. Barnes, A. C. & Hendricks, C. H.: *Ohio State M. J.*, 49: 493-495, 1953.
4. Fremont-Smith, M. & Graham, R.: *J.A.M.A.* 150: 587-590, 1952.

telling if a cell is becoming malignant. He could send his cervical cytology slides to a laboratory and have them returned for his study until he decides whether or not he is proficient in reading them. If he has the time and the desire he can do the screening of his cases and send the difficult slides to a laboratory for diagnosis.

GYNECOLOGISTS NEED CERVICAL CYTOLOGY STUDY

Some gynecologists are availing themselves of cervical cytology study, but some feel that their observations of the cervix are enough to tell them whether or not a cancer is present. Cervical cytology study will discover a cancer not possibly diagnosable by direct observation of the cervix. Of course, any specialist in uterine cancer can tell a cancer if it falls in his line of vision, but the cancers we are interested in are in the "hole" or in the canal, or higher, where it is impossible to see or palpate them. These are the early malignancies we are after, because with proper treatment they have a high cure rate.

When the gynecologist does use the cervical cytology study along with his specially developed powers of observation, it gives him a tremendous advantage in border line cases. In case the cytological study is very hard to interpret, it can be followed closely and repeated observations and studies made until a definite conclusion is reached for the patient. This is one place where constant observation of the living patient and direct laboratory study of the exfoliated cells tie together to give medicine one of the great advantages of science working for the survival of the human being.

STAGE-O CARCINOMAS

Cervical cytology has played a great part in the fairly recent International Classification of Stage O carcinoma of the cervix, neoplasms which have been with us for years, but only recently recognized and classified. Preclinical carcinoma of the uterine cervix was formerly found only when the cervix was removed for some other reason, the diagnosis being made by the pathologist. Cytology has opened up an entirely different conception of this dangerous lesion. It is here that cervical cytology and the gynecologist can play the greatest role in reducing the cancer death rate in women.

Most authorities agree that from the beginning of a cervical carcinoma until it can be recognized clinically is a matter of years. Which means that every day many women are going in and out of the offices of physicians without their preclinical cervical carcinomas being recognized. This situation could be much improved by the more general use of cervical cytology study.

ESTIMATED ESTROGEN LEVEL

During the cervical cytology study it is possible to rate the number of bacteria present and to decide if the trichomonas vaginalis is present. On all our private patients an estimate of estrogen level is made. There has been no free use of injectable estrogens in the past few years. Each patient should have this estimate made before receiving any estrogens. This is easily accomplished in the cervical cytology study. If the estrogen level is high she may be given testosterone; if low, estrogens; or a combination of the two may be used according to the estrogen level and the clinical symptoms.

It is a pleasure to read the slides for the estrogen level on patients who have had a panhysterectomy; they are clean and clear.

To correlate the cervical cytology studies and the pathological study

of the cervix with the Bata-Glucuronidase study of Kasdon et al.[5] gives further help in the diagnosis of cancer of the cervix.

GYNECOLOGIST-CYTOLOGIST

Cervical cytologists who have been studying Papanicolaou smears for 8 years or longer realize that a small percentage of some cells are very difficult to interpret, but the great majority of cells can be interpreted with a high percentage of accuracy.

Some years ago it was presented that one of the best ways to know what questionable cells were was to take the cells out and see what they look like.[6] When a patient has such cells and there is another reason for surgery, such as a uterine prolapse, a panhysterectomy can be done and the exact origin of the cells found. Thus the gynecologist who is a cytologist does his own surgery and can examine the fresh specimen and within a few days have the slides to help him know exactly what the cells in question are.

The laboratory cytologist may not receive a pathological report for weeks or months after having studied questionable cells. He has forgotten details of the case and upon re-study wonders in what way the cells were questionable.

It then appears that the person who takes the history, examines the patient, takes the smears, reads the slides, performs the operation, makes the pathologic studies, and supervises radiation therapy renders the greatest service to the patient with a preclinical uterine cancer.

SUMMARY

Cervical cytology study includes an aspiration and scraping of the cervical os after a complete pelvic examination has been done. A small amount of pHisoHex lubricant is used. The punch biopsy is becoming obsolete because it is not the best means of discovering cervical cancer. Some G.P.'s do not make complete pelvic examinations, many G.P.'s and some gynecologists are using cervical cytology studies to help them make diagnoses. The discovery of Stage O carcinomas of the uterine cervix gives the greatest hope for the highest cure rate in uterine malignant growths. The gynecologist-cytologist should give the most efficient service to the patient with a preclinical uterine cancer.

5. Kasdon, S. C., et al.: *Surg., Gynec. & Obst.*, 97: 5, 1953.
6. Wilcoxon, G. M. & Falls, F. H.: *Ohio State M. J.* 44: 165-167, 1948.

Enuresis

Discontinuance of punishment and disparagement does away with most of the serious by-products of the child's enuresis. He finds in his physician a protector and a helper, and learning that a knowledgeable person does not view his wetting as an expression of badness restores his self-confidence. It is wise to encourage enuretic children by means of a star-chart or similar device, and to moderately restrict fluids during the late afternoon and evening. If the wetting continues in spite of the outlined regimen, the roots of the problem may lie so deep as to require psychiatric assistance.

E. J. Werdein, *M. Ann. District of Columbia*, 23: 673-676, 1954

Current Problems in Blood Transfusion

Hemolytic transfusion reactions, transmission of disease and contamination of the blood by bacteria may be prevented by more cautious transfusions

PETER VOGEL, M.D., *New York, New York*

The ready availability and ease of administration has led to abuse of this therapy. Often transfusions are given with inadequate indications and without sufficient realization of the hazards that may be involved. Many harmful and even fatal reactions probably occur which are not attributed to blood transfusion.

The transmission of most diseases is much less likely to occur with the present method of donor selection. Treponema pallidum is destroyed if blood is kept at refrigerator temperature for 96 hours. Malaria plasmodia have been known to appear in the blood years after an attack of the disease. The parasite survives in stored blood and is not destroyed by refrigeration. The risk of transmission is greatly reduced if there is no history of attack for 2 years.

One of the serious problems arising in transfusion therapy is the prevention of massive contamination of blood by bacteria. It has been shown that as many as 2 to 5% of blood bank donations may be so contaminated. Most of these bacteria grow poorly at refrigerator temperature, but their products may lead to a marked fever reaction. When sedimented red cells are to be used, the plasma should be removed just prior to administration in order to prevent growth of bacteria which may be introduced by this procedure.

By far the greatest problem in the operation of blood banks is the transmission by transfusion of

homologous serum jaundice. At present this must be considered as a calculated risk in the administration of any blood or plasma, since there is no effective method of destroying the virus.

STORAGE OF BLOOD

Standard preservatives now in use allow storage of blood up to 3 weeks before administration; 90% of transfused red cells have a normal survival in the patient if the blood has not been stored more than 14 days. After 21 days of storage, 30% of the transfused red cells do not survive more than 24 hours in the recipient.

Recent studies have shown that it is possible to preserve red cells for months or years, by first dehydrating with glycerin and then storing at subzero temperature.

Although uncommon, immunizations may become difficult problems leading to severe hemolytic reactions and death. Patients with blood dyscrasias, especially hemolytic anemia, lymphoma, cancer and lupus erythematosus, who require frequent and repeated transfusions, are more prone to immunization to some of the less antigenic blood-group factors.

Multiple iso-antibodies may occur in pregnancy. It is imperative, therefore, that the serum of the mother be used to match directly the donor blood for exchange transfusions in hemolytic disease of the newborn. When a patient has received previous blood transfusions, or has any other history suggesting iso-immunization, direct matching by the indirect antiglobulin test should always be performed.

SUBSTITUTIONS FOR WHOLE BLOOD

Whole blood is the most effective substance to combat shock due to hemorrhage. If it is not readily available, substitutes, called plasma volume expanders, may be used in an emergency; in civilian practice, at least, there is no tendency to resort to these substitutes. Albumin, a blood derivative which does not transmit the virus of hepatitis, could be used effectively as a plasma expander if sufficient supplies were available. The high percentage of allergic reactions would limit the widespread use of Dextran. The single advantage that all of the expanders have over plasma is that they do not transmit the virus of hepatitis. Until more experience is gained, it would be wiser to limit the amount of these substitutes to 2,000 cc. or less.

TRANSFUSION COMPLICATIONS

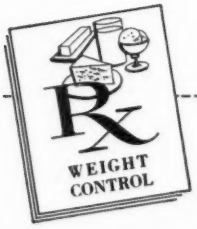
Hemolytic transfusion reactions are still the most serious, because of the danger of death. Improper storage and handling of the donor's cells is an occasional cause. Pyrogens are the most common cause.

Circulatory overload can be a serious complication. Manifested shortly after transfusion, by sudden dyspnea, cyanosis, cough and signs of pulmonary edema. Older people and those with heart disease are especially susceptible, and caution should be exercised in this group. Infants and young children may suffer circulatory overload, especially if large amounts of blood are injected rapidly into the veins.

About 1 to 5% of blood transfusions are followed by reactions of an allergic type that are seldom serious and consist usually of urticaria, occasionally of angio-neurotic edema, and more rarely, of asthma. In a very ill patient, these reactions may be fatal unless transfusion is immediately discontinued and small doses of adrenalin administered.

Bull. New York Acad. Med., 30:657, 1954.

the doctor's problem...



No one envies the man who must tell a woman she is overweight . . . and that the cause is overeating!

The doctor's task is easier when he prescribes a palatable diet with foods which are typical of those the entire family needs each day. Medically supervised studies on weight reduction show women . . . and men . . . losing 1½ to 2 pounds per week on diets of every-day foods which provide approximately equal weights of protein, fat, and carbohydrate. Hunger is less of a problem with this diet . . . for a combination of protein and fat in a meal slows digestion . . . and the absorption of nutrients.

The foods included in these diets provide all essential nutrients in amounts recommended for adults. Only calories are in deficit. Dairy foods are an important feature of these meals because of their high proportion of nutrients in relation to the calories they provide. Their taste appeal and variety make the diet easy to follow until the desired weight is lost.

Doctors! Send for the convenient leaflet and diet instruction sheets containing menus for three full meals a day for an entire week. Diets at two moderately low calorie levels are included. These diet instructions will be useful even where a person may require a different calorie level for weight loss. For such individuals, the physician can suggest desired modification, retaining the basic diet plan.

These materials are yours on request—without cost or obligation. Simply fill out the coupon below and mail it today. We'll send your materials along by return mail.

NATIONAL DAIRY COUNCIL—*A non-profit organization* Y-4
Since 1915 . . . promoting better health through nutrition research and education.
111 N. Canal Street, Chicago 6, Illinois.
Please send me, without cost or obligation, a pad of diet instruction sheets and leaflet on weight reduction.

NAME _____

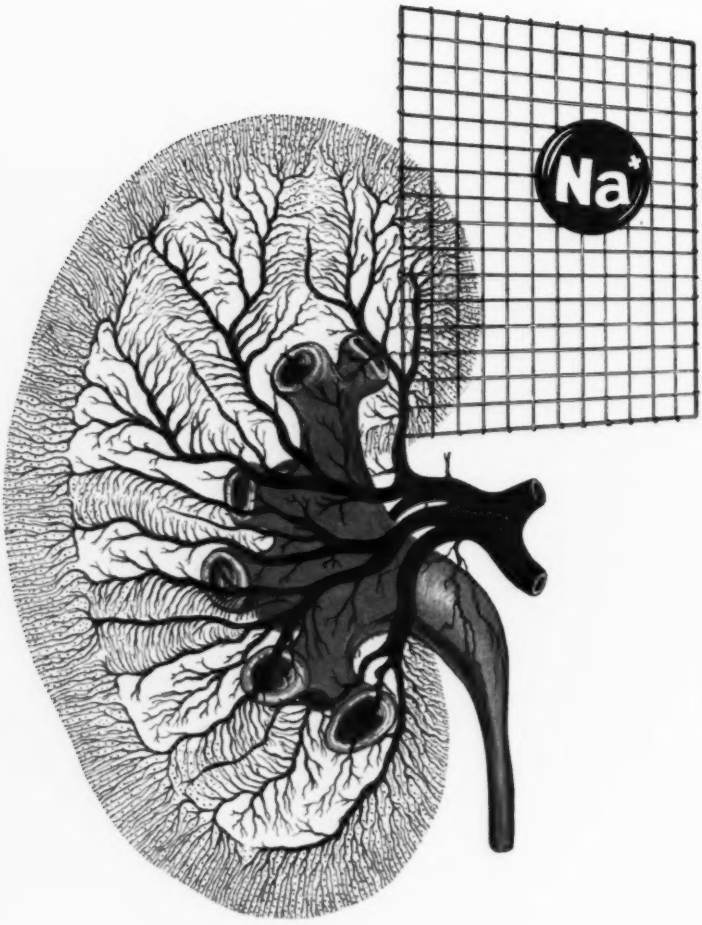
PROFESSIONAL DESIGNATION _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

MICTINE*—NON-MERCURIAL ORAL DIURETIC

Diuresis



Increased sodium ion excretion following administration of Mictine indicates the inhibition, or "screening," of reabsorption of this ion, as well as increased elimination of water and chloride.

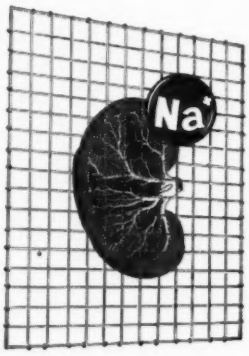
by "Sodium-Screening" Action

Features the New Orally Effective, Well-Tolerated, Non-Mercurial Diuretic Agent

Culminating many years of research, Mictine, brand of aminometramide, fulfils the following criteria for an improved diuretic agent:

Mictine, neither mercurial, sulfonamide nor xanthine, is orally effective, well-tolerated and without known contraindications. Mictine causes excretion of water, sodium and chloride in amounts sufficient to reduce edema, yet does not upset the acid-base balance because only neutral salts are excreted. It is continuously effective with minimal side effects.

Effectiveness—Approximately 70 per cent of unselected edematous patients treated with Mictine have been found to respond with a satisfactory diuresis. This response is considerably greater when used in the control of the edema of congestive heart failure in patients with normal kidney function.



Clinical Field—Mictine is useful primarily in the maintenance of an edema-free state and in the initial and continuing control of patients with mild congestive failure. Mictine may be used also for initial and continuing diuresis in more severe congestive states, particularly when mercurial diuretics are contraindicated.

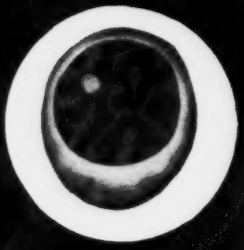
Administration—The usual dosage for the average patient is one to four tablets daily in divided doses with meals and on an interrupted schedule. The latter may be accomplished by giving the drug on alternate days or for three consecutive days and then omitting it for four days.

For severe congestive states the dosage is four to six tablets daily with meals, also in divided doses on interrupted schedules.

Supplied—Uncoated tablets of 200 mg.

*Trademark of G. D. Searle & Co.

SEARLE



in hay fever

and perennial

allergic rhinitis

most cases respond to

Piromen®

(pseudomonas polysaccharide)

A biologically active polysaccharide, PIROMEN stimulates the reticuloendothelial system. It is not an antihistamine.

Alone or as adjunctive therapy, PIROMEN has been proved effective in the treatment of hay fever and other allergic disorders.[1-4] It is especially useful in severe cases or in those that resist conventional therapy. Once symptoms are controlled with the aid of PIROMEN some patients may be maintained symptom-free by conventional means.[3]

A safe therapeutic agent,[1,3,4] PIROMEN is sterile, nonprotein and nonanaphylactogenic. Unlike ACTH or cortisone, which it resembles in therapeutic efficacy, PIROMEN does not produce troublesome side effects.[1,3,4]

PIROMEN, a stable, aqueous, colloidal dispersion, is supplied in 10-cc. vials containing 4 to 10 gamma per cc. It may be administered safely in a wide dosage range.

References

(1) Leech, C. A., Jr.: Clin. Med. 2:255, 1955. (2) Lincoln, C. S., Jr.: M. Times 83:178, 1955. (3) Aronoff, S., and Ghaemi, A.: J. M. Soc. New Jersey 50:564, 1953. (4) Fenton, M. M.: Ann. Allergy 11:336, 1953.

For information, write "Piromen" on your Rx and mail to

TRAVENOL LABORATORIES, INC.

subsidiary of Baxter Laboratories, Inc., Morton Grove, Illinois

Proctology in Office Practice

The importance of an examination with a proctoscope and sigmoidscope is stressed; treatment for pruritus, polyps and hemorrhoids

R. V. GORSCH, M.D., *New York, New York*

Rectal bleeding is the commonest and most important proctologic symptom. Bleeding in or on the stool is more of rectal or colonic tumors or severe ulcerative lesions than is blood on the toilet paper. Many patients are unaware of it for long periods. Patients should be advised to give a passing look before flushing the toilet bowl. A proctoscopic examination shortly following bleeding may be best for locating the site of bleeding.

The triad of (1) bleeding, (2) change in bowel rhythm, either constipation or diarrhea, and (3) abdominal pain or cramping is highly suggestive of rectosigmoidal cancer and, unfortunately, not early cancer.

Digital examination well up into the rectal ampulla palpates the cervix, urethra, prostate vesicles, ischial spines and coccyx. It makes the diagnosis in 50% of rectal cancer. Anesthetizing the anal sphincters with an aqueous or oil-soluble anesthetic facilitates the anoscopic and particularly the subsequent proctoscopic examination. Digital examination is done in the lateral Sims or lithotomy position: never in the knee-chest.

Examination of the anal canal is often done while withdrawing the proctoscope. However, in the commonest anorectal conditions (hemorrhoids, fissure, fistulas, cryptitis and papillitis, and anal infections) instrumentation is often necessary. Anoscopic examination is sometimes better done in the knee-chest or inverted position.

Failure to use the proctoscope accounts for many cancer patients going beyond surgical help. These examinations should be recorded in terms of the size of the scope and the distance reached above the dentate line.

SIGMOIDOSCOPY

Sigmoidoscopy in 10% of patients (particularly those with previous pelvic surgery) may be impossible. The scope is readily passed under direct vision to the rectosigmoidal junction (recognized by change in color and the circular rugae). Further advance under direct vision is easy when the axis of the sigmoid is more or less straight. It is usually necessary to advance the tube in the sigmoid step-by-step, assisted by gentle inflation, or sounding with a cotton wound applicator or alligator forceps. Some traction on the mesosigmoid, rectum, or anal musclature is almost inevitable. Pain or cramping is usual—forewarn and reassure the patient as the tube advances. The patient's cooperation is essential. No force should be used. If the tube is directed in the proper axis it will usually elevate and unroll the sigmoid by its own weight. Angulation of the sigmoid or pathologic fixations may preclude a sigmoidoscopy. The possibilities of perforation in difficult manipulations are out of all proportion to any additional information to be gained.

The best preparation is caster oil, plus tap water enemas. Patients with diarrhea and bleeding, abdominal cramps or pain should not have cathartics.

For proctologic examination in infants and children, anesthesia is necessary. The preferable analgesic is 1/16 (6. mos.) to 1/6 (4 yrs.) grain nembutal with 1/500 grain atropine.

Radiologic study of the colon implies that rectum and lower sigmoid disease have been excluded by proctoscopy and sigmoidoscopy. By direct visualization of the rectum and lower sigmoid 70% of adenomas and carcinomas of the large gut are found.

An external thrombotic hemorrhoid is removed under local procaine anesthesia supplemented with oil-soluble Anucaine. Hemostasis should be complete. Dress with powder (thymol iodide). If excision is not desired injection of 5 to 8 cc. oil-soluble anesthetic below the clot will relieve pain and anal spasm and hasten resolution.

For a complete perianal "corona" of external thrombotic piles, treatment is warm astringent applications, laxation, sedatives and antihistamine preparations. If no local infection, and pain is severe, an oil-soluble anesthetic is injected (Anucaine); there is nothing to be gained by evacuation of the hemorrhoids.

Thrombotic piles may mean associated local or general disease. Always make a complete proctologic examination.

TREATMENT BY INJECTION

The injection (or "sclerosing" treatment) of internal hemorrhoids is a simple office procedure in properly selected cases, never without a complete proctoscopic examination.

The injection treatment is preferable in uncomplicated first-degree hemorrhoids. Occasional bleeding, anal discomfort, sense of fullness or incomplete evacuation, moisture or pruritus make a syndrome often seen. Many of these patients have infected anal canals with a low-grade proctitis and erosions overlying the internal hemorrhoidal plexus, rather than actual hemorrhoids. Radical hemorrhoidectomy in these patients results often in a stenotic fibrous anal canal.

A few simple injections, with advice regarding bowel habits do not contraindicate subsequent surgery.

The G.P. must be equipped with properly lighted instruments and must be familiar with the surface anatomy of the anal canal, able to identify positively the ano-rectal line. The safe solutions are (1) 6% phenol in sweet almond oil, (2) 5% quinine and urea ("quinuride"). If quinine is used epinephrine, Benadryl or Chlortrimeton and Aminophylline should be immediately available for parenteral use.

The injections are sometimes easier to do with the patient in the knee-shoulder or -chest position or in the inverted position.

A rectocele must not be misinterpreted as a hemorrhoid. Injection in the anterior midline above the sphincters entails some risk of sloughing. The injection treatment is occasionally useful in excluding internal hemorrhoids as a source of obscure rectal bleeding.

The strangulated hemorrhoid usually can be managed in the office or even in the patient's home. The key to such ambulatory management is gentle dilation of the sphincter, with reduction, followed by local and general baths, dehydrating applications, antispasmodics and sedation. Antibiotic therapy may be helpful particularly if immediate surgery is contemplated.

FISSURES

In anal fissure there is history of repeated pain following bowel movements, with bleeding. Inspection confirms the diagnosis.

The recent fissure is a linear rupture or erosion of the anoderm, usually posteriorly. Inject the perianal tissues and bed of the fissure with 2% procaine or an oil-soluble anesthetic followed by dilation, sitz baths, catharsis, sedatives and the local application of 5% scarlet R. ointment.

The chronic "indurated" fissure requires complete excision of the fissure and all diseased tissue, and complete division of the subcutaneous external sphincter muscle.

Anal stenosis is a common condition, often with chronic anal fissure.

Fissures in infants and young children should be treated by periodic dilation, anesthetic scarlet R. ointments, and daily enemas of Phospho-Soda.

ABSCESSES

In cases of perianal infections, careful digital examination is essential in order to exclude the deeper variety of abscesses. The deep abscess—ischio-anal, supra-levator, or retro-rectal—must be drained without delay. Many are well advanced when first observed. Further delay favors extensions to deeper spaces with complicating organisms and sometimes to a general sepsis. Antibiotic therapy will not "resolve" the abscess; may be used before referring for surgery. The most useful antibiotic is penicillin and dihydrostreptomycin in combination.

The abscess which complicates chronic ulcerative colitis should be drained by simple puncture and aspiration only. In these cases, in addition to the pyogenic infection there appears to be an unexplained deficiency factor in peri-anal wound healing, which underlies the chronic ulcerative colitis syndrome. Another is the abscess complicating regional ileitis, or tuberculosis.

In chronic ulcerative colitis and regional ileitis, peri-anal abscesses with fistulization are usually indicative of advanced disease in the colon or ileum.

The treatment of anorectal fistula is usually not an office procedure.

In idiopathic, intractable pruritus ani, hydrocortisone acetate ointment (1 to 2½%) has given excellent results. The perianal skin is first cleansed with a detergent (such as Septisol), and the ointment applied.

ACTH and cortisone preparations may also be used with due regard to possible side-effects.

PRURITUS

Occasionally, the intractable pruritus is associated with (or is secondary to) a fissure or prolapsing hemorrhoid. Surgery is for the anorectal lesions per se; its effects on the pruritus are often disappointing. Pruritus secondary to antibiotic therapy usually responds to fungicidal ointments or powders, starch enemas, and lactic acid preparations by mouth.

A severe pruritus with diarrhea in the course of antibiotic therapy (particularly Terramycin) may be a severe staphylococcus enterocolitis which may kill. Ilotycin is specific in these cases.

Treatment of condylomata acuminata consists in the application of 20% Podophyllin in compound tincture of benzoin q. 48 hours. Large lesions should be treated in sections. Podophyllin is highly irritating to normal skin. Protect it.

POLYPS

Many small adenomatous polyps are missed by not looking. The commonest, a bean-sized tumor, may be readily removed with biopsy forceps followed by desiccation or coagulation of the base and surrounding mucosa.

In case of a larger sessilated or pedunculated polyp, make histologic section of the entire tumor. Polyps below the peritoneal reflection with thin pedicles are removed in toto by the electric snare.

The adenoma, broad based, fixed, superficially ulcerated and over 2 cm. in diameter, is already malignant. It requires radical surgery. In general the office treatment of polyps should be confined to the common small sessilated adenoma and the polyp with the thin pedicle. Occasionally a pedunculated polyp protrudes from the anus. In young children tie a ligature around its pedicle, since its attachment may be high in the bowel above proctoscopic view.

J. M. Soc. New Jersey, 52:1, 30-35, 1955

Clinical Comparison of Bulk and Stimulant Laxatives

Studies were carried out at a chronic-disease hospital with 1200 patients. All of the patients under observation were semiambulatory (bed or chair), permanently institutionalized, and severely constipated. Patients in this study had an average frequency of one bowel movement every third day. They were very uncomfortable and suffered side effects while they were on the placebo.

It has been stated that bulk laxatives are preferable to stimulant laxatives in the aged patient, as his constipation is because of insufficient bulk in his diet.

In a blind, controlled study, it was demonstrated that either 4.0 gm. (8 tablets) of methylcellulose or 4 tablets per day of caroid and bile salts with phenolphthalein produced an adequate laxative effect.

Caroid and bile salts with phenolphthalein produced a more rapid onset of laxative action than methylcellulose.

Methylcellulose required was 8 tablets daily, and this large number of tablets was resented by the patients.

Caroid and bile salts with phenolphthalein proved more uniformly effective than methylcellulose and produced fewer side-effects.

L. J. Cass, M.D., et al., *Ann. New York Acad. Sc.*, 58:455, 1954.

Certain Common Urological Problems in Children

Congenital abnormalities and hydrocele may require surgery; persistent or recurrent pyuria indicates urinary tract disease

D. E. HOWARD, M.D., *Des Moines, Iowa*

Pyuria is the commonest symptom of urinary tract disease; 1-2% of all illnesses in children are due to infection of the urinary tract, 75 to 90% are in females. The organism most often encountered is *E. coli.*

As soon as pyuria is found, the case is reviewed, particularly as to the possibility of congenital abnormalities. If no cause of the pyuria is found, and if this is the first of such illnesses, I make a trial with medication with no further investigation other than a gram stain of the urinary sediment.

Usually I start treatment with Gantisin, Elkosin or Thiosulfil; triple sulfas may be used,—the *upper limit* of recommended dosages in *all* cases, whether of chemotherapy or of antibiotics.

Examine periodically, even though the mother feels that the child is well. A persistent or recurrent pyuria, despite the absence of symptoms, makes complete study essential. Hematuria is most apt to mean nephritis, acute urinary-tract infection or tumor; dark urine may be the result of a heavy diet of beets. The presence of casts, albuminuria and edema almost certainly means nephritis. Intravenous pyelography may be carried out, if desired, but no instrumentation of the urinary tract.

The commonest cause of microscopic hematuria in infants and children is some manipulative procedure; next is pyelonephritis, com-

mon in girls under the age of 3.

Inspection may reveal the meatus small, ulcerated, with a small crack in the mucosa. Meatotomy is the treatment. A small meatus should not be overlooked when an infant is circumcized.

Prior to manipulative investigation, blood count, prothrombin time, bleeding and clotting times should be done.

SURGICAL TREATMENT

Congenital anomalies may sometimes be corrected surgically. Blood dyscrasias may or may not be amenable to treatment. Infectious lesions usually respond to specific chemotherapy or antibiotic treatment.

Complete descent of the testes occurs in 99% of males by birth. Bilateral cryptorchism warrants a trial at hormonal therapy; unilateral, treatment by surgery. Large hernias and hydroceles are contraindications for hormonal treatment. Bilateral undescended testicles should be handled separately.

At 9 to 12 years 250-500 I.U. of the hormone, twice weekly for 8 to 12 weeks, is an adequate course of treatment; if this fails, operation is indicated. Surgical correction of the undescended testicle is necessary in a very high per cent of these cases. In a small per cent surgery will fail because of the unavoidable sacrifice of too much blood supply in order to bring the testicle into the scrotum. If bilateral, an artificial hormonal puberty and maintenance will be required.

HYDROCELE

The infantile type of hydrocele is sealed off, does not vary in size and warrants early correction. The true congenital type communicates with the peritoneal cavity and thus may come and go. Very often, there is a demonstrable hernia. An acquired hydrocele usually has a history of trauma or epididymitis.

Except in the acquired type, the diagnosis of hydrocele in a child is made on the history, since birth, of an enlarged scrotum, which may or may not vary in size, trans-illuminates readily and may or may not have an impulse (depending on an associated hernia.)

Aspiration where one is sure there is no associated hernia makes a fair percentage of cures. After aspiration make no injection of sclerosing solution. Surgical treatment is usually the choice, and consists of either eversion or almost complete removal, of the sac.

If hernia is associated, treat by surgery any time after the first year.

J. Iowa M. Soc., July, 1954.

The Factor of Infection in Heart Failure

From a study of 300 cases of heart failure in an industrial city, in 156 cases there was good evidence that the respiratory infection was the precipitating cause of failure (bronchitis in 103, pneumonia in 51, tuberculosis in 2), and in only 11 patients, most of whom were comatose, was it thought to be secondary.

Heart failure was precipitated by a respiratory infection in 74 of the 76 patients with cor pulmonale and in 82 of the remaining 224 patients with other forms of heart disease. The incidence of heart failure in winter was twice that in summer.

It is suggested that antibiotics are at least as important as either digitalis or mersalyl in the treatment of heart failure.

F. J. Flint, *Brit. M. J.*, 4895:1018, 1954

Rectal Pentothal as an Anesthetic Agent in Obstetrics

Experience shows rectal pentothal to be effective, painless, easy to administer and quite safe for both mother and baby

E. W. FURGURSON, M.D., *Plymouth, North Carolina*

Over a period of 7½ years author has used rectal pentothal in 750 deliveries and found it to be painless, reliable, and simple to administer. It requires little nursing assistance; used properly, it is free from danger.

A decrease in anxiety and tension, with beginning drowsiness, is noted within 2 to 5 minutes after instillation; anesthetic effect in 5 to 15 minutes and lasts from 1 to 2 hours. Full consciousness is usually regained within 30 to 60 minutes after delivery, but many patients remain relaxed and drowsy for 2 to 3 hours. Analgesia and amnesia were complete in 678 of our 750 cases.

Pentothal sodium for rectal administration is supplied in vials, each containing 3 gm. Only 7 cc. of water is used for each gram of the drug. In most cases a single dose, 1 gm. per 75 lbs. of body weight, has been satisfactory, and supplemental doses are never required. The amount should be reduced 10% in anemic, phlegmatic, or hypothyroid patients, and in those with obesity, edema, or generalized anasarca.

A cleansing enema is not essential. If one is given, tap water or saline solution should be used.

Demerol IM 50 to 100/mg. q. 1 to 3 hours until the cervix is dilated, to 3 or 4 cm. in multiparas and to 4 cm. or more in primiparas. At this stage the pentothal solution is drawn into a 20-cc. syringe in the exact dose desired, plus the volume required to fill a 12 to 16 F catheter.

The patient is placed on her left side, the lubricated catheter is inserted 6 to 8 inches into the rectum and the syringe emptied, catheter is withdrawn and a gauze pad pressed against the anus.

Inhalation of a nitrous oxide-oxygen mixture is used in the few cases requiring mild supplementary anesthesia during the second stage and, if needed, this or local anesthesia is used for perineal repair.

ALLERGIC REACTIONS

No untoward reactions were noted. Whenever a familial or personal history of allergy was obtained, an oral dose of pentobarbital sodium (0.1 gm.) was given during the prenatal period. One patient showed evidence of allergic dermatitis, and she was not given pentothal. Several patients gave histories of extreme allergic reactions to inhalation anesthetics of various types. All (after test doses of barbiturates) were given rectal pentothal with excellent results.

There were no maternal deaths and no instances of increased postpartum bleeding, retained placenta, change in b.p. and respiration, or other complications from the use of the drug. While they were not required in our series, it is important that oral pharyngeal airways and 100% O_2 be always available. Benzidrine sulfate in 1-cc. ampules should be on hand for IV administration in cases of barbiturate poisoning. Other drugs of value are metrazol, coramine, and 0.3% picrotoxin.

EFFECTS ON INFANT

No untoward effects on the baby, who usually begins a lusty cry immediately on delivery. The best prophylaxis against a blue baby is 100% O_2 to the mother by inhalation as the head begins to press against the perineum. There were 8 stillbirths and 10 neonatal deaths in this series.

Pentothal should not be employed in patients with severe diseases involving the glottis, trachea, or mediastinum, cardiac decompensation or inflammatory lesion of the rectum.

Total amnesia was the state of 90% of our cases. No depressive after effects were noted, and all patients were pleased with the results of the drug.

North Carolina M. J. 15:437, 1954.

Early Postsurgical Ambulation

The important beneficial effects of early ambulation following major surgery are not fully appreciated. The patient should be encouraged to get out of bed before the end of the day of operation, or on the first day thereafter, and permitted to stand, walk and sit. Deep breathing and leg exercises should be instituted immediately after the patient recovers from the anesthetic, and continued, along with other activities, during the succeeding days of his postoperative hospitalization.

Even in cases of inguinal hernia, a recent study of 1,300 cases revealed no substantial difference in the rate of recurrence, as between the early and the late ambulatory groups.

The complication rates in all categories can be markedly reduced without any undesirable effects. Such a program, when properly conducted and supervised, is a great factor in the rapid rehabilitation of the patient; it results in a great monetary saving to him, to the hospital and to industry, and it permits a greater utilization of hospital beds.

L. T. Palumbo, *J. Iowa M. Soc.*, 45:12, 1954

Fewer recurrences in PSORIASIS

I=76% E=38% R=19%
with RIASOL

The most discouraging feature of psoriasis is recurrence. Ormsby and Montgomery* write: "The disease often recurs, and may do so repeatedly for the greater part of a lifetime."

Clinical investigation shows that in psoriasis treated with RIASOL recurrence is exceptional. In a series of resistant psoriatics, classified as therapeutic failures to other drugs, there was improvement with RIASOL in 76% of cases, eradication of the lesions in 38%, and recurrence in only 19%. Such recurrences responded readily to further treatment with RIASOL.

The explanation for these unusual results is to be found in the deep action of RIASOL in the prickle-cell layer of the stratum mucosum, from which the cutaneous lesions of psoriasis originate.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

RIASOL is supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.

*Ormsby, O. S. & Montgomery, H., *Disease of the Skin*, 6th ed., 1943, p. 291.

BEFORE USE OF RIASOL

AFTER USE OF RIASOL

PROVE RIASOL YOURSELF

Send for Generous Clinical Package

SHIELD LABORATORIES
12850 Mansfield Ave., Detroit 27, Mich.

CM 5-55

Please send me professional literature and generous clinical package of RIASOL.

_____ M.D. _____ Street

City _____ Zone _____ State _____

Druggist _____ Address _____

RIASOL for PSORIASIS

The Ocular Fundus in Relation to General Body Disease

Ophthalmoscopy is a valuable aid to the diagnosis of diabetes, hypertension or the diseases of the kidney

A. J. BEDELL, M.D., *Albany, New York*

Those who can recognize and interpret clinical signs find that no single method of physical examination is as important as ophthalmoscopy.

DIABETES

The earliest retinal alterations of diabetes are either small, sharply defined exudate spots or minute hemorrhages or both. As time passes some exudates disappear, new ones form, and often several coalesce to make large yellowish masses. Soon after or coincident with the exudates the retinal veins become dilated, a very suggestive sign. After several years, new vessels appear over the disk, small and few in the beginning but become more numerous and larger. On occasion large hemorrhages form between the retina and vitreous.

Retinopathy is most common in diabetes of mild grade but may occur in any grade, even those of great severity, with blood sugar appearing to be under control.

Diabetes and nephritis may be present at the same time, and laboratory tests discover both diseases.

HYPERTENSION

The fundus picture of hypertension varies with the age of the patient, the type, the duration, and the forebears. The majority of hypertensives show no ophthalmoscopic deviations from normal. There are two types of hypertension, the benign

and the fulminating; the former may, after many years, become the latter, but this is rare.

Normally a retinal artery crosses a vein without indenting it or retarding the blood flow, but when the artery is stiffened by pathologic processes, compression and displacement of the vein takes place. In the hypertensive state the artery reflex is intensified until it resembles a bright copper wire. As time passes, this becomes a silver line; subsequently atheromatous plaques may develop in the artery wall. The retina may become edematous in small, isolated, gray-white spots, ("cotton wool") ,or the entire retina dull gray from fluid retention, or the edema may be restricted to the disk, a true papilledema (choked disk).

Hemorrhages, exudates, and edema may come and go, even while the vessel degeneration progresses, so that the prognosis as to life depends upon the vessel state and not upon these ephemeral omens. In fact, retinal edema, exudates, and hemorrhages *may* completely disappear.

The terminal stage of the retinopathy in chronic kidney disease is practically the same as that found in fulminating hypertension: retinal edema, exudates and hemorrhages. Often, however, the dysfunction may be quickly controlled, and lines of exudate radiating from the macula, the result of nonprotein nitrogen excess, entirely disappear.

When the arteries are narrow with a diffuse retinal edema, soft exudates, and a stellate figure in the macula, the finger of death has been laid upon the sufferer, and there is no hope. If the patient is young, the retinopathy may develop very acutely, and death comes quickly. Sometimes an extensive, severe retinopathy regresses, but even when this happens, it does not mean that the patient will survive more than 18 months.

We hope that every physician will use the ophthalmoscope in his routine general examinations and thereby increase his diagnostic skill to the benefit of all his patients.

New York State J. Med., 54: 23, 3229-3232, 1954.

Naucaine® in Nausea and Vomiting

Author reports orally administered Naucaine stopped nausea and vomiting in 95 of 100 pregnant cases.

In the clinic group of fifty-two patients, Naucaine (procaine hydrochloride) used orally in tablet form gave complete relief from vomiting in forty-nine cases. Persistence of nausea occurred in three cases. Nineteen were primipara and 33 were multiparous.

In the private group of 48 patients, the drug was prescribed in tablet form and given orally every 30 minutes for four hours followed by one tablet every hour until complete relief from nausea was obtained. A total of 20 tablets was dispensed to each patient. Forty-six cases obtained complete relief and two patients failed to respond.

The new drug was found to be free from toxicity or unpleasant side effects except in one case, and was found to be effective in controlling nausea and vomiting of pregnancy, providing absolute relief in 88%, overall improvement in 95% and failure in 5%.

Dean C. Curtis, *Obstetrics and Gynecology*, 5:209, 1955

Otolaryngology in General Practice

A discussion of the treatment for sinusitis, nasopharyngitis, acute otitis media and acute laryngotracheo-bronchitis

B. S. RICH, M.D., *Baltimore, Maryland*

Acute rhinitis, is the precursor of most respiratory disease conditions. Do not employ antibiotics until signs of secondary involvement appear, and these signs are easily recognized. The use of antihistamines, with or without the usual Aspirin-Phenacetin-Codeine combination, is effective in most cases, continued for at least 3 days. Bed rest, a well-heated room, increased fluid intake and hot wet towels to the face at intervals are all very effective.

Excessive intake of carbohydrates seems to make one more susceptible to colds. Children playing on the floor are frequently subject to blasts of dust-filled hot air. Persons susceptible to colds should keep their bedroom windows closed at night and the heat turned off. The room should be aired daily.

A child has a profuse watery discharge from the nose, worse at night, the nose becomes stuffy and the child coughs most of the time it is in bed. Suspect an allergy. An antihistamine q.h.s. will frequenlty alleviate until a diagnosis is made.

In acute sinusitis, apply hot moist compresses to the face for ½ h., and cold, wet compresses for next ½ h. This repeated constantly throughout the waking hours. A good fine spray of a mild astringent is much more efficacious than "nose drops." Nasal sprays merely decongest the nasal membranes, promote better drainage from the sinus ostia and keep down nasal bacterial count.

Abstain from using antibiotics as much as possible. Triple-sulfas, Gas-

trisin very effective. Penicillin not as good results unless in sufficiently large dosage and for at least 4 days. If headache, pain, etc. persist in spite of this treatment, mechanical drainage of the sinuses will be required.

If you suspect an allergy in conjunction with the sinusitis, the best intranasal medication in this case would be Biomydrin. Antihistamines should also be administered. When the sinusitis has subsided the allergy should be proven or disproven and treated, if found present. Allergy is frequently the underlying etiological factor.

NASOPHARYNGITIS

Nasopharyngitis gives rise to many complications. It can cause pain in the mastoid area, pain almost anywhere in the face, pain in the throat, coughing, and dysphagia. Many cases of chronic progressive deafness and otitis media, as well as persistent low-grade fevers, arise from involvement of this area; postnasal discharge is often the cause in prolonged unproductive cough and in recurrent or chronic bronchitis.

Chemotherapy and/or antibiotics should be given. Local treatment should be similar to that described under sinusitis. For cases which are not acute but are persistent, the local use of "Furacin Nasal Solution Plain" or "Chloresium Nasal Solution" is excellent.

Many cases of chronic nasopharyngitis are due to excessive or infected lymphoid tissue in this region and will not subside until this tissue is removed.

In infections of the external auditory canal, Burow's Solution Pack is still very effective, supplemented with the local application of heat. This pack should be changed daily. If the infection is mycotic and not bacterial, a pack saturated with Cresatin and thymol (5 grains to the oz.) and changed daily, gives excellent results. If otitis media is associated, refer to an otologist.

TREATMENT OF ACUTE OTITIS MEDIA

Acute otitis media should be treated via the external auditory canal, the nasopharynx and the vascular system. Auralgan or Otodyne are good decongesters and pain arresters, applied to the tympanic membrane hourly. A decongestant with or without other drugs should be used in the nose so as to reach the eustachian tube orifice. Chemotherapy or antibiotics should be employed systemically. If the tympanic membrane gives any evidence of fluid under pressure in the middle ear, a myringotomy should be done without delay. If mastoid symptoms do not subside readily, consultation is in order.

After the pain and fever in acute otitis media have subsided, the membrane should be observed frequently. It should return to its normal appearance in 2 or 3 weeks. If it remains dull or has any residual discoloration, an otologist should be consulted.

To perform a myringotomy, the patient's head is held perfectly still or you may destroy a large portion of the tympanic membrane; incise in the posterior inferior segment and from below, upward. Make an incision, not just a stab. If the fluid which escapes is purulent, use either Aureomycin Otic, Terramycin Otic, or alcohol and peroxide locally. If discharge does not cease within 2 weeks, more definitive treatment is indicated.

Acute laryngotracheo - bronchitis usually occurs at night and requires quick action on the part of the doctor. Give a sedative, but not enough to slow respiration. Spasm of the bronchial tube must be relieved. Adrenalin (1:1000) according to the

age of the patient: large doses of antibiotics and sulfas should be given, and the patient placed in a warm steam tent. Often an emetic such as mustard will help the patient to cough out mucus plugs. The pulse should be recorded and stridor noted at least every 15 minutes. If the pulse increases 20 points in 15 to 30 minutes, or stridor increases, the patient should be hospitalized immediately and O_2 made available in the ambulance.

Epistaxis—Instruct the patient to sit up. Place a 2 in. piece of cotton, which has been saturated with an astringent, into the bleeding nostril and have the patient lean slightly forward. Pinch the nostril firmly with your fingers for 10 min. Keep in an upright position so that blood will not drain back into the throat.

If bleeding does not stop, pack nose, the first portion placed as high in the vault of the nose as possible, the last along the floor of the nostril. Hemo-Pak — ½ in. wide strip of hemostatic, absorbable, cellulose gauze — is easily handled and does not have to be removed until it becomes very loose from absorption after several days. It is an excellent agent for nasal packing. Penicillin in large daily doses seems to help control the bleeding, especially when packing has to be removed.

Maryland Med. J., October, 1954

The Finished Product—vs—The Raw Material

In Gallbladder Therapy

Each tablet contains:

PURE DEHYDROCHOLIC ACID
0.25 Gm. (3¾ *gr.*)

•

BELLADONNA
8 mg. (⅛ *gr.*)

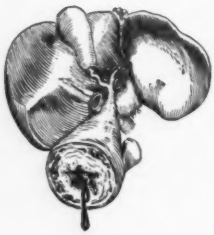
•

PHENOBARBITAL
8 mg. (⅛ *gr.*)

For therapeutic superiority in gallbladder management, Nubilic assures beneficial hydrocholeresis, since Nubilic contains not a mixture of bile salts or acids, or cholic acid, but the full dosage of *pure dehydrocholic acid,* the ultimate product in bile processing. The therapeutic value of the other oxidized bile acids is not clearly known, but it *is* known that pure dehydrocholic acid definitely stimulates secretion of bile which is low in solids.

For comprehensive action, Nubilic contains *belladonna and phenobarbital,* to reduce biliary spasm, relax the sphincter of Oddi and thereby encourage free flow of bile into the duodenum.

Bottles of 25, 50 and 100 tablets.



NUBILIC®

HOBART LABORATORIES, Inc.

CHICAGO 10, ILLINOIS, U.S.A.

Complications of Antibiotic Therapy

Skin and oral complications, G.I. disturbances, anaphylactic shock or a bronchopulmonary infection may result from the use of the antibiotics

G. A. PERERA, M.D. *New York, New York*

A bacteriologist once remarked that for every weapon discovered to combat bacterial infection, the bacteria have at least a dozen countermeasures at their command to escape extermination. It is possible that resistant strains may appear in the future in epidemic form. It is possible that an increasing percentage of the population will become sensitized and unresponsive. It is possible that the recent increase in such disorders as periarteritis nodosa and lupus erythematosus disseminatus may be related to the introduction of antibiotic therapy.

The commonest skin complications: A macular or maculo-papular eruption which may be scarlatiniform, even vesicular or purpuric if reaction is severe enough; urticaria or angioedema alone or as a part of a serum sickness. A third type is eczematous dermatitis, this may be widespread enough to give a generalized exfoliation with severe weeping and oozing, or be most severe in the groins or on the feet. A contact dermatitis may be seen in individuals who handle antibiotics or who use them locally, particularly penicillin and streptomycin, and application of these antibiotics in ointment form is a good way to induce sensitization. Oral complications may occur with any of the antibiotics but are most frequent with the broad-spectrum (Aureomycin, chloramphenicol and Terramycin) therapy. Stomatitis and glossitis from the use of antibiotics containing troches or lozenges occurs in

15 to 20% of patients. The first measure is to stop the administration of the drug.

ANTIHISTAMINICS AND CORTISONE

For the urticarial or serum sickness antihistaminics in large doses are very helpful. Pyribenzamine or Benadryl, up to 400 or 600 mg. daily, will often reduce the hives and relieve the pruritus. In other skin and mucous-membrane reactions, in contact dermatitis from antibiotics (or anything else) the antihistaminics are of little value.

For the severe dermatologic manifestations the use of the corticosteroids is indicated. They relieve the pruritus, edema and weeping and quickly make the patient feel and look better. Cortisone, 300 mg. daily for 3 days, and then diminished by 50 mg. each day, will usually give good results.

For the local care of the skin, if the eruption is merely moribilliform, calamine liniment or peanut oil. If theer is weeping or oozing, wet compresses of aluminum acetate solution 5% (diluted 1:30) or normal saline are used.

For the stomatitis one may depend mainly on warm saline mouth washes. Often large doses of vitamin-B complex are also given, probably because the appearance of the oral mucosa reminds us of that seen in vitamin B deficiencies. For the vaginitis or perianal dermatitis, douches or wet compresses of silver nitrate, 1:5000, are very helpful, particularly if there is a complicating moniliasis. After douching or compressing 3 or 4 times daily, a dusting powder of salicylic acid 2% in starch and talc may be used.

Actually, in these situations it is not so much what one does as what one does not do that helps the patient.

It is standard practice to treat mild initial urinary infections among out-patients with small doses of a sulfa drug on an empirical basis. Should the infection persist, procure by catheter sterile urine for culture. Do drug sensitivity tests on the organism grown, 25 to 50% of our urine cultures are now showing resistance to many of the drugs previously considered appropriate for these organisms. If tests show the organism is sensitive to only a few medications a thorough urological investigation is in order, search being made for calculi or other obstructions. The appropriate antibiotic should be saved for tiding the patient over any operation, for cleaning up any residue of infection.

In preparation for uretero-sigmoid transplantation it is the practice of all urologists to administer Terramycin, Neobacin or Sulfathalidine in doses to sterilize the colon. Some patients harbor a staphylococcus which then undergoes tremendous overgrowth in the bowel when all other organisms are killed off, and may cause fatal toxemia and septicemia.

Genito-urinary complications of importance are:

1. Vaginitis from the broad-spectrum drugs.
2. Obstruction to the urinary tract due to sulfa crystals.
3. The development of drug resistance if antibiotic agents are squandered before the proper moment.
4. Cholera-like reactions due to the overgrowth of drug-resistant staphylococci in the bowel.
5. Direct toxicity due to the chemotherapeutic agents themselves.

The incidence of sensitivity reactions to penicillin has increased to as high as 7 and 10% of patients.

ANAPHYLACTIC SHOCK

The treatment of anaphylactic shock, which may include severe bronchospasm and edema of the base of the tongue may demand arti-

ficial respiration, oxygen or helium-oxygen mixtures, pressure breathing and intubation. In the absence of special equipment, manual compression of the lower thorax and upper abdomen may maintain breathing while anti-allergic drugs are being used—IV injection of 0.3 c.c. of 1:1000 adrenalin, 50 mg. Benadryl or 10 mg. Chlor-Trimeton or Pyribenzamine and 20 mg. ACTH by infusion. If pulmonary edema develops, intermittent pressure breathing with a mask apparatus is indicated. These reactions cannot be safely foreseen by penicillin skin tests or prevented by the use of hypoallergenic penicillin. An antihistaminic, e.g. Chlor-Trimeton, administered with penicillin tends to prevent untoward penicillin reactions.

PENICILLIN REACTIONS

Perhaps the time has come to limit penicillin by injection to cases in which high blood levels are required such as bacterial endocarditis. Welch, et al made a survey of hospitals having 7.5% of the bed-capacity in the country and found that 55 to 60 anaphylactoid reactions and 19 of 20 deaths occurred after injections of penicillin—all of *procaine* penicillin. The incidence of serious reactions to penicillin administered by mouth is negligible. Adequate blood levels may be maintained by oral dosage especially when given on an empty stomach—one million units of potassium penicillin-G given on arising and on retiring.

The local mouth reactions to the tablet may be prevented by the use of penicillin in capsule or as a coated tablet.

In cases of bronchiectasis, one million units of penicillin daily inhaled by aerosol eliminated the penicillin-resistant staphylococci we have encountered.

In the treatment of chronic bronchopulmonary infections, penicillin is the drug of choice for infections with gram-positive bacteria. Penicillin by mouth in a dosage of one million units on an empty stomach 2 to 3 times a day should be substituted routinely for parenteral injection, and by aerosol for cases of bronchiectasis and suppurative sinusitis.

The use of an antihistaminic drug is indicated when IM injection of penicillin is given, and probably also in oral administration of penicillin in cases with allergic tendencies. Low dosage of the broad-spectrum antibiotics over a long period is preferable to high dosage briefly; therefore, a trial should be made of 750 to 1000 mg. a day of either Terramycin or Aureomycin in 3 to 7 divided doses, with milk or orange juice. It may be given for 2 to 3 weeks without causing diarrhea. Pus in the sputum is the guide to treatment with broad-spectrum drugs rather than the emergence of gram-negative organisms in culture. The hemophilus-influenza organism, often not isolated without the use of rabbit blood media, may be responsive to Carbamycin or Erythromycin. These agents, as well as tetracyline may also be found effective in penicillin-resistant staphylococci. Invasion with contaminating organism, when proven by suppurative sputum, should be promptly treated by the antibiotic appropriate to the infection. Drainage of retained pulmonary secretions may be aided by the use of the head-down position, broncho-dilator areosols and wetting agents.

GASTRO-INTESTINAL SYMPTOMS

The most frequent GI symptoms are nausea and vomiting, diarrhea and pruritus ani, chiefly after the use of the broad-spectrum antibiotics Aureomycin and Terramycin.

Nausea can usually be avoided by giving a half-glass of milk with each

dose of drug. Gastric erosions and hemorrhage have occurred in patients receiving Aureomycin or chloramphenicol. Diarrhea, often with cramps and tenesmus, continues to be an important and distressing complication during the use of many of these drugs, especially Aureomycin and Terramycin, may begin after a few doses, more often after 3 or 4 days. It may persist for many weeks or months after the drug has been stopped.

Recent reports of Neomycin alone or in combination with other drugs, in preparing patients for intestinal surgery, indicate that this drug is very effective in eliminating most of the fecal bacteria, while diarrhea is seldom encountered.

Terramycin 250 mg. orally q. 12 hours in postoperative patients—7% experience diarrhea, usually mild. Tablets of lactic-acid bacilli given in milk t.i.d. appear to cure or prevent such diarrhea. Terramycin IM every 12 hours yielded effective drug levels and was complicated by diarrhea in only 2% of patients.

Ulcerative proctitis and colitis have been seen occasionally, one case so severe as to require surgery as a life-saving procedure.

GI complications which follow the use of antibiotics are usually not *serious*. Ulceration of the lower tract is the most serious complication which may occur but it is uncommon. Occasionally complications do develop which are more serious than the original illness.

Bull. New York Acad. Med. 30:539, 1954.

Management of Rheumatoid Arthritis with Prolonged Cortisone Administration

Symptoms often are suppressed indefinitely with cortisone and relapse is rapid after withdrawal; however there is a danger of side-effects

W. S. C. COPEMAN, M.D., *London, England*

With a routine initial dose of 100 mg. daily, it proved possible to measure the patient's response after 5 days. In more recent cases in this series the initial dose was lowered to 75 mg. daily—a level which has proved to be equally satisfactory in most cases.

The maintenance dose may have to be increased temporarily when conditions of extra stress occur, but should be lowered again as soon as possible—average oral dosage 69 mg. a day. 14 patients have received cortisone continuously for over 2 years, and during this period their dose requirements have not altered to any large extent, although in 2 cases the dose had to be increased somewhat.

In all but 3 cases the blood pressure remained unaffected by treatment; in one, the blood pressure rose from 120/80 to 200/105 on the 18th day. The condition was symptomless, but, as it has so far proved impossible to find a dose which will control arthritis without further increasing the hypertension, cortisone is being withdrawn. In the other 2 cases the b.p. rose slightly at the onset of treatment, but has not increased during the past year. Both these patients are working full time, and we have not felt it necessary to withdraw the hormone.

One patient after 2 years' continuous cortisone, complained of exhaustion, which was found to be due to anemia secondary to melena. On

admission to hospital the hemoglobin had fallen to 4.23 g. Without alteration in the dose of cortisone, she became symptom-free after transfusion and medical treatment. There was no x-ray evidence of peptic ulcer 3 weeks after the melena stopped, but she has continued on an ulcer dietary regimen.

It is agreed that cortisone in adequate dosage will suppress the symptoms and signs of rheumatoid arthritis in a short period, and it is recognized that when the drug is withdrawn a rapid relapse generally follows. It is argued by some that, because of this necessity for prolonged or even indefinite administration, cortisone does not constitute practical therapy, and that owing to the danger of side-effects its use is not justified in practice.

A study was reported by Ward, et al. (1953) in which 65 patients were treated. In 57 (88%) of these, cortisone controlled the symptoms adequately, and in 8 (12%) the drug was stopped because the dose required for relief of symptoms also produced side-effects. In 46 patients the drug was given continuously from 8 to 24 months. In 44 of these patients there was moderate to great improvement; in the remaining 2 cases the relief was only mild. 9 cases showed mild side-effects. These authors concluded that long-term cortisone is a practical and useful method of treatment in rheumatoid arthritis, and is the treatment of choice in certain phases.

As cortisone is not actually curative, and since we have seen radiological progression of joint damage in patients in whom the symptoms were being suppressed, we consider that more conservative methods of treatment, such as adequate rest, salicylates, and physiotherapy, should generally be tried first, as these will themselves in some cases produce adequate remission of the disease.

Absolute contraindications to cortisone therapy are recent or active tuberculosis, present or past psychosis or psychoneurosis, diabetes, hypertension, and severe osteoporosis; while long-standing cases with much permanent irreversible deformity and joint damage are also unsuitable for cortisone therapy.

The most suitable cases are those in which the functional disability exceeds the anatomical joint damage.

20 cases of rheumatoid arthritis have been treated with cortisone; 14 of them received this drug for over 2 years. All were previously incapacitated, but 17 have been able to return to their occupations with the help of this treatment.

Brit. M. J., 4871:1109, 1954.

Survival of Patients With Carcinoma of the Breast

The survival curves of the entire group who had radical mastectomy and the entire group treated nonradically show a higher mortality in the first few years in the group with nonradical treatment. On the other hand, the corresponding *normal* mortality rate is also higher for that group. The obvious reason for this is that the group with nonradical treatment is composed of persons who are older, and hence would die at higher rates, than those who had radical operation.

The radical mastectomy operation leaves much to be desired from the standpoint of long-term survival. Between 24 and 38% of patients with cancer behave as if cured with respect to mortality, regardless of method of treatment. Age has again been shown to be a most important factor in survival of patients with carcinoma.

R. G. Small, et al., *J.A.M.A.*, 157:216, 1955

"an antipruritic of the first order"[1]

EURAX®

Cream and Lotion

(BRAND OF CROTAMITON)

relief in minutes that lasts for hours

"highly effective"[2]**—relieves itch in over 90 per cent of patients**[3,4]

***prompt, prolonged effect*—relief of itch, noted almost as soon as EURAX is applied, continues for 6 to 10 hours**[3]

***safe*—"...relatively harmless...,"**[2] **"...nonirritating...,"**[4] **"...of low sensitizing index...,"**[5] **"...no toxic effects..."**[4]

"pleasant to employ"[6]**—odorless, colorless, nonstaining**[7,8]

"an excellent scabicide"[1]

EURAX® (brand of crotamiton) 10% Cream and Lotion. Prescription only.

References:

(1) Ereaux, L. P.: Canad. M. A. J. *70*:122, 1954. (2) Annotations: Lancet *1*:83 (Jan. 10) 1953. (3) Couperus, M.: J. Invest. Dermat. *13*:35, 1949. (4) Soifer, A.: Quart. Rev. Int. Med. & Dermat. *8*:1, 1951. (5) Hitch, J. M.: Brit. J. Dermat. *64*:408, 1952. (6) Tronstein, A. J.: Ohio M. J. *45*:889, 1949. (7) Patterson, R. L.: South. M. J. *43*:449, 1950. (8) Peck, S. M., and Michelfelder, T. J.: New York J. Med. *50*:1934, 1950.

GEIGY PHARMACEUTICALS • *Division of Geigy Chemical Corporation*
220 Church Street, New York 13, N.Y.
In Canada: Geigy Pharmaceuticals, Montreal


AUREO

No matter how you measure it, AUREOMYCIN can claim a distinguished record: in terms of published clinical trials—there are more than 7,000; as for actual doses administered—the figure is more than a *billion*.

But the most significant fact is told by time. For seven years, AUREOMYCIN has been in daily use, repeatedly employed by thousands of physicians throughout the world. Again and again, it has proved to be a reliable broad-spectrum antibiotic; well-tolerated, prompt in action, effective in controlling many kinds of infection.

Seven years great

A CONVENIENT DOSAGE FORM FOR EVERY MEDICAL REQUIREMENT

7

OMYCIN*

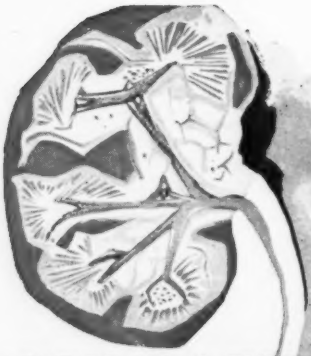
HYDROCHLORIDE
Chlortetracycline HCl

Lederle

5

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY Pearl River, New York

*TRADE-MARK



IN URINARY TRACT INFECTIONS

RELIEF

STARTS IN A MATTER OF MINUTES WITH

urised

chimedic

Overcomes Muscle Spasm

Prompt Antisepsis

SWIFTLY **combats the two primary causes of pain, burning, urgency, dysuria, frequency in genito-urinary infections.**

URISED's dual-powered formula exerts direct and steadfast control on pain-producing factors.

In a matter of minutes, through the parasympatholytic action of atropine, hyoscyamine and gelsemium, painful smooth muscle spasm is usually relieved and relaxed—directed toward a restored normal tone. In two or three days, distress may subside completely.

With equal rapidity, URISED's antibacterial agents — methenamine, salol, methylene blue and benzoic acid—traverse the entire urinary tract to hold bacterial growth at a minimum, reduce bacterial and pus-cell content, encourage healing of mucosal surfaces.

Prescribe URISED with confidence for prompt, effective pain relief, and for more dependable control of pyelitis, cystitis and urethritis. It is virtually non-toxic.

Samples, literature, available on request.

Supplied in bottles of 100, 1000, 2000

CHICAGO PHARMACAL COMPANY

5547 N. Ravenswood Ave., Chicago 40, Illinois

Pacific Coast Branch
381 Eleventh St., San Francisco, Calif.

Southern Branch
240 Spring St., N. W., Atlanta, Ga.

Massachusetts General Hospital Clinico-Pathological Conference

By using the process of elimination, a diagnosis is determined for a patient who had abdominal pain of two months' duration

---

MILES P. BAKER, M.D., *Boston, Massachusetts*

A man, 58, admitted to hospital because of "shooting" abdominal pain of 2 months' duration.

Two-and-a-half years previously intermittent, not severe, pain developed in the midepigastrium when he was hungry, and was relieved by food and milk. After a year he consulted his physician, who demonstrated a "peptic ulcer" by x-ray examination and placed him on a 6-meal bland diet, antacids, belladonna and cessation of smoking. On this program he became symptom-free within 3 months. He gradually liberalized his diet, discontinued medications and resumed smoking, with no recurrence of symptoms. Was well until 3 months before entry, when there was a gradual onset of constant dull pain in the left flank just above the iliac crest. This did not seem to be related to meals. Two months later an upper GI series was negative, and a barium-enema examination revealed only a small polyp in the lower colon. A week later he was awakened with "shooting" abdominal pain in the lower abdomen, to left radiating upward to involve the entire abdomen. No such episodes previously. The pain was "sharp and crampy"; in attacks of variable severity almost daily until admission; no vomiting.

T. 97°, p. regular at 74, r. 20, b.p. 150/80.

The problem is one of the cause of abdominal pain, dragging and constant for 2 months with severe

exacerbations for 3 weeks. It is surprising that a pain as severe as this was described could have been relieved by 50 mg. of Demerol. This man who had periods of acute pain, had no localized tenderness, no abdominal mass and no involuntary spasm. He had been growing worse, had had little appetite, and had lost 30 pounds within 2 months. The one finding that stands out in the surgeon's observation of the development of a collateral venous supply along the flanks. In the laboratory there was little in the way of positive findings.

With the negative x-ray examinations and persistence of steady pain with serious exacerbations, could this man have had an aneurysmal dissection? or leakage from a saccular aneurysm of the abdominal aorta? I should expect more evidence of circulatory collapse. One thinks of a thrombotic process in the inferior vena cava; but such a lesion, for which there was no antecedent or corroborative reason, would probably not have produced such pain as this man had. If I can consider the presence of collateral venous distributions on the abdominal wall as real, and of important degree, attention turns toward some disease that produced pressure on the inferior vena cava or actually invaded it, and that very finding alone militates against the diagnosis of abnormal aortic disease. I think of a primary malignant process in the body and tail of the pancreas or a primary lymphosarcoma or possibly sarcoma arising from the connective tissue in the retroperitoneal space.

Cancer of the body of the pancreas is known to press upon or invade the inferior vena cava, with thrombus formation, and may produce such symptoms of obstruction as this man had. His losing weight is in keeping with the diagnosis; absence of some common findings as jaundice, ascites, epigastric mass, does not exclude such a diagnosis.

Possibly something like a retropressure on or even invasion of the peritoneal lymphosarcoma, with inferior vena cava; but my first bet is cancer of the body of the pancreas.

Anatomical Diagnosis: Adenocarcinoma of pancreas, with metastasis to liver.

New England J. Med., 252:1, 29-32, 1955.

Acute Intestinal Iron Intoxication

In recent years an increasing number of fatal poisonings in children by means of ferrous sulfate tablets or other iron salts has been reported. From 3 to 10 grams of ferrous sulfate proved to be fatal in younger children; the margin between therapeutic and toxic doses of iron salts is smaller than is generally assumed. Most observers attributed death to a local necrotizing action of the iron in the intestinal canal resulting in shock from hemorrhages and fluid loss. No evidence of absorption of ferrous sulfate was found.

K. R. Reissmann, et al, *Blood*, 10:35, 1955.

A Simple Method of Determining Blood pH and CO_2 Combining Power

1. To each of 2 large test tubes marked A and B, add 1.0 c.c. of plasma obtained from oxalated blood.

2. To tube A, add 2.5 c.c. of neutral distilled water. Keep the level in this tube constant with that of tube B by further addition of water if necessary. Tube A is the blank.

3. To both tubes, add 1 drop of PSP indicator (prepared by dissolving 1 ampule of phenolsulfonphthalein used in renal function test [1 c.c. contains 6 mg.] into 5 c.c. of distilled water. Note the color. Bright red indicates a normal pH, orange or yellow acid and purple, alkaline pH.

4. To tube B, add 1.0 c.c. or 0.05 HCl and shake for 3 minutes. Titrate with 0.01 N NaOH solution, using a pipette calibrated in 1/10 c.c., until the shade (rather than the depth) of color matches with that of tube A. The depth of the end-point will be slightly affected by the turbidity.

Calculations: 5.0 c.c.—amount of NaOH solution used $\times$ 10 = MEq per liter of plasma bicarbonate. For practical purposes, the plasma bicarbonate value is equal to its CO_2 combining power.

Example:

PSP indicator = Bright red (normal ph)

NaOH solution used = 2.3 c.c.

(5.0—2.3) $\times$ 10 = 27 MEq per liter of bicarbonate

$27 \times 2.24 = 60.5$ volumes of CO_2 per 100 c.c.

I had difficulty in determining the exact end-point, but, using "normal" controls, this difficulty was overcome. With practice, this method eliminates the sources of error pertient to gas analysis, and has the added advantage of requiring no special aparatus.

G. Nadeau, *Am. J. Clin. Path.*, July, 1953.

The Clinical Significance of Serum Aldolase

Aldolase is an enzyme that plays a crucial role in the chain of reactions comprising glycolysis. The level of serum aldolase was determined in 880 patients who had a wide variety of disease. The normal average value was 6.0 units per cc. of serum with a range of 3.0 to 10.0 units.

A study of 219 patients who had hepatic disease revealed increases up to 10 times the normal, in all patients who had early acute hepatitis; normal or only slightly increased in patients with obstructive jaundice or cirrhosis of various types.

Determination of serum aldolase may serve as a useful clinical test in the differential diagnosis of hepatic disease.

J. A. Sibley, et al., *Proc. Staff Meet. Mayo Clin.* 29:591, 1954.

Factors other than Prostatic in Urinary Retention

Patients with prostatic enlargement and other types of obstruction at the bladder neck may have concomitant disturbances that contribute significantly to the dysfuction. One of these is preexisting stricture of the distal urethra.

Decompensation of the detrusor may exist coincidentally with the obstruction, although etiologically independent of it. This may be a result of a structural or a purely functional deficiency or both.

A more important type of dysfunction results from the alterations in the wall of the bladder that develop in consequence of longstanding obstruction. These may be reversible to the degree that they do not prevent the resumption of normal function after operative removal of the obstructing factor. A satisfactory result, however, may require careful conservative management after operation, with particular attention to habit training.

H. S. Talbot, *New England J. Med.*, 251:420, 1954.

Chronic Hyperventilation Syndrome

Chronic hyperventilation is an often confusing symptom complex. These syndromes are common, generally have a chronic course, often mimic serious organic disease, and are usually attended by marked disability. Generally, they have a chronic course, recurring in acute exacerbations, and simulate grave organic disease. The syndrome is caused by organic or psychogenic factors or both.

The patient's complaints implicate the cardiovascular system most often, neurological, musculoskeletal, GI, respiratory, and psychiatric symptom-complexes less frequently. Peripheral paresthesias are the most consistent symptoms, and disordered breathing is the commonest sign. These are, however, seldom prominent features. A high index of suspicion is necessary to detect the subtle diagnostic clues.

Diagnosis is confirmed by inducing an acute exacerbation of the typical syndrome with a few minutes of voluntary overbreathing. The attack is ended by a similar period of rebreathing from a paper bag. Treatment begins with these same procedures. The dramatic reduplication and resolution of the attack help the patient understand his illness, give him an effective method for controlling future attacks. Concurrent organic disease is handled accordingly. Appropriate explanation and reassurance reenforce these measures. Often this is all that is necessary to restore the patient to his previous state of good health. In any event, the way is paved for additional therapeutic maneuvers.

B. L. Lewis, *J.A.M.A.*, 155:1204, 1954

Vaginal Discharge

We use clear water douches for cleansing purposes only then a water soluble vaginal cream which has low drug concentration. By longer, interrupted treatment series, one is less likely to see adverse tissue response to drugs and is more likely to rid the rugae of damaging, deep-seated, recurring infections.

Evaluate the male as a source of reinfection.

Too much attention has been paid to the presence or absence of Doderlein bacilli and to the pH of the vagina. We prefer to consider vaginitis as due to attack by bacterial, viral, protozoan, or yeast-mold organisms, rather than to disturbance of chemistry or to changes in bacterial flora. Our efforts now are to attack the demonstrated cause of the vaginitis.

A. F. Lee, et al, *Northwest Med.*, 53:1227, 1954

unexcelled among
sulfa drugs . . .

Minimal Side Effects*

*for Highest Potency • Wide Spectrum
Highest Blood, Plasma & Tissue Levels
Safety• •Economy

Few therapeutic agents, and none of the other sulfas, can claim the same degree of freedom from toxic side effects offered by the Triple Sulfas. The use of only a fractional dosage of each component sulfa drug reduces the possibility of undesirable side effects to an absolute minimum. No case of agranulocytosis has been reported resulting from their use.

Because they are so well tolerated, because of their wide spectrum of effectiveness and their outstanding economy, the Council-accepted Triple Sulfas are now more widely used than any single sulfa drug.

Triple Sulfas, alone or in combination with certain other agents, are available from leading pharmaceutical manufacturers under their own brand names.
This message is presented on their behalf.

TRIPLE SULFAS

Meth-Dia-Mer Sulfonamides

All Sulfas are not Triple Sulfas!
ASK ANY MEDICAL REPRESENTATIVE ABOUT THE TRIPLE SULFA PRODUCTS HIS COMPANY OFFERS!

Cyanamid Fine Chemicals

AMERICAN Cyanamid COMPANY Fine Chemicals Division, 30 Rockefeller Plaza, New York 20, N.Y.

The Psychiatric Aspects of Obesity

Few overweight patients are obese as a result of organic disease. This knowledge enables the GP to approach the management with full confidence that his key problem is control of the intake of food. Slavish adherence to height - weight tables that purport to give ideal norms is silly.

Some knowledge of why the person wants to reduce will be imperative. Many are hard-working men and women who get little satisfaction from their families or their jobs. If the pressure is almost solely from outside sources, such as family affairs, employer pressure, response to advertising threats, the physician must help the patient decide whether the wish to reduce is a reasonable one in the light of all the factors involved. If obesity becomes distressing to the patient and others, plan another reducing regimen, take into consideration the emotional need to eat, any anxieties and frustrations, and devise methods of supporting the patient during the painful periods of deprivation.

H. W. Brosin, *J.A.M.A.*, 155:1238, 1954

Mortality and Late Results of Infectious Hepatitis in Pregnant Women

Eleven women who had had infectious hepatitis during pregnancy 1 to 18 years previously were investigated for evidence of liver damage. Only 2 were free of clinical and laboratory evidence of liver disease.

This small series of cases suggests that infectious hepatitis, when it occurs in the last trimester of pregnancy, carries a higher mortality and a greater tendency to chronic liver damage than when it occurs in the nonpregnant patient.

H. L. Frucht, et al., *New England J. Med.* 251: 1094, 1954.

NEW PHARMACEUTICAL PRODUCTS

Pen-SF Capsules *(Pfizer)*

Each capsule contains potassium penicillin G, 200,000 units, in combination with ascorbic acid, thiamine mononitrate, riboflavin, niacinamide, pyridoxine, calcium pantothenate, vitamin B_{12} activity, folic acid, and menadione. *Indications:* all infectious diseases caused by penicillin-susceptible organisms. *Administration:* orally. *Dosage:* as directed by physician. *Supplied:* in bottles of 30 and 100 capsules.

Loten-Encote *(Maney)*

Each tablet contains Rauwolfia serpentina alkaloids, 0.75 mg., neothylline, 100 mg. and rutin, 20 mg. *Indications*: hypotensive agent for treatment of certain non-malignant types of hypertension. *Dosage:* one to three tablets daily — not more than three tablets in 24 hour period.

Tetracyn-SF Oral Suspension *(Pfizer)*

Contains tetracycline in combination with thiamine, riboflavin, ascorbic acid, niacinamide, pyridoxine, calcium pantothenate, vitamin B_{12}, folic acid and menadione. *Indications:* for all infectious diseases caused by Tetracyn - susceptible organisms. *Administration:* orally. *Supplied:* in dry powder form for reconstitution in a two-ounce round flint bottle.

Medomin *(Geigy)*

Mild sedative in low dosage; hypnotic of medium duration in larger doses. *Indications:* functional insomnia and anxiety-tension states, daytime sedative - tranquilizing agent, relieves nervous tension as well as hypotensive effects in persons with elevated blood pressure. *Dosage:* as hypnotic in adults, 200-400 mg. As sedative, 50-100 mg. two or three times daily. *Supplied:* tablets of 50 mg. and 100 mg., in bottles of 100, 250 and 1000. Tablets of 200 mg. in bottles of 50, 250 and 1000.

Abten *(Maney)*

Prepared in two strengths. No. 844, pink tablet, contains Rauwolfia serpentina alkaloids, 1 mg. No. 849, green tablet, contains Rauwolfia serpentina alkaloids, 2 mg. *Indications:* treatment of labile hypertension. *Dosage:* No. 844, 2 to 4 tablets daily. *Supplied:* bottles of 100 and 1000.

Raufia *(Maney)*

Each tablet contains mannitol hexanitrate, 30 mg., veratrum viride, 100 mg., rutin, 20 mg., Rauwolfia serpentina alkaloids, 0.75 mg. *Indications:* treatment of essential hypertension. *Dosage:* one to three tablets daily — not more than three tablets in 24 hour period. *Supplied:* bottles of 100 and 1000 tablets.

Vi-thyro *(Roerig)*

Complete thyroid preparation containing the equivalent of one grain U.S.P. thyroid activity, with thiamine, riboflavin, niacinamide, pyridoxine, calcium pantothenate, vitamins B_{12}, A, D, ascorbic acid, alpha tocopherol, choline, inositol, methionine, iodine, magnesium, and manganese in each gelatin capsule. *Indications:* wherever increased thyroid activity is desirable. *Dosage:* as determined by physician. *Supplied:* in amber-colored bottles of 100 capsules.

A-P-Cillin-200 *(White)*

Each small coated tablet contains acetylsalicylic acid, 2½ gr., phenacetin, 2½ gr., caffeine, ¾ gr., diphenylpyraline hydrochloride, 2 mg., procaine penicillin G, 200,000 units. *Indications:* acute upper respiratory infections. *Dosage:* 1 tablet q.i.d. for duration of symptoms. *Supplied:* bottles of 24 and 100 tablets.

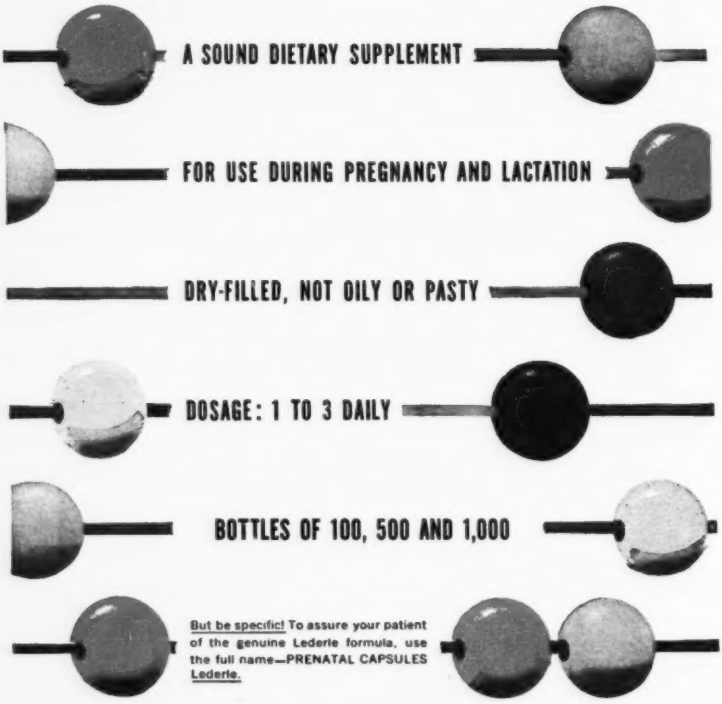
Quinadome Creme *(Dome)*

5% diiodohydroxyquinoline in Acid Mantle Creme base. pH 4.8. Protozoacidal, fungicidal and bactericidal. *Indications:* Infectious eczematous dermatitis, amebiasis cutis, pruritus vulvae et ani and vulvovaginitis. *Dosage:* apply freely over the infected areas. *Supplied:* 1 oz. tubes and 4 oz. and 1 lb. jars.

Cort-Dome 1% and 2% *(Dome)*

Anti-inflammatory and anti-pruritic topical cream. *Indications:* most types of dermatitis and eczema. Also pruritus vulvae et ani. *Dosage:* a small amount gently applied. *Supplied:* ½ oz., 1 oz., 2 oz. and 4 oz. jars.

PRENATAL CAPSULES LEDERLE



A SOUND DIETARY SUPPLEMENT

FOR USE DURING PREGNANCY AND LACTATION

DRY-FILLED, NOT OILY OR PASTY

DOSAGE: 1 TO 3 DAILY

BOTTLES OF 100, 500 AND 1,000

But be specific! To assure your patient of the genuine Lederle formula, use the full name—PRENATAL CAPSULES Lederle.

Each capsule contains:

Vitamin A	2000 USP Units	Folic Acid	1 mg.
Vitamin D	400 USP Units	Calcium (in $CaHPO_4$)	250 mg.
Thiamine	2 mg.	Phosphorus (in $CaHPO_4$)	190 mg.
Riboflavin	2 mg.	Dicalcium Phosphate Anhydrous ($CaHPO_4$)	869 mg.
Ascorbic Acid	35 mg.	Iron (in exsiccated $FeSO_4$)	6 mg.
Vitamin B_{12}	1 mcgm.	Ferrous Sulfate exsiccated ($FeSO_4$)	20 mg.
Vitamin K (Menadione)	0.5 mg.	Manganese (in $MnSO_4$)	0.12 mg.
Niacinamide	7 mg.		

LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid COMPANY Pearl River, New York

Lederle

Use this Literature Service to get the latest information about the conditions listed

FOLD FIRST

FROM

FOLD SECOND

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY ENVELOPE
FIRST CLASS PERMIT NO. 205, SEC. 34.9, P. L. & R., WINNETKA, ILL.

Clinical Medicine
POST OFFICE BOX M
WINNETKA, ILLINOIS

Use this postage free mailer

To request literature through the free literature service.
To enter your subscription. To renew your subscription.

2 MONTHS BONUS!

if you renew before expiration date* or order a new subscription using this order form we will add 2 extra issues to your subscription account!

Circulation Department

Please enter my subscription to Clinical Medicine at the rate of
$5.00 ☐ 1 year $8.00 ☐ 2 years $10.00 ☐ 3 years

* How to read expiration date. Note code numbers appearing beneath address. Read only first four digits. First two digits represent month of expiration, second two digits represent year of expiration. 0155 means your subscription expires in January of 1955; 1156 expires November of 1956.

Literature Service Department

Please forward the following literature. I have circled the number that corresponds to the conditions listed in the free literature section.

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24	25	26
27	28	29	30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49	50	51	52
53	54	55	56	57	58	59	60	61	62	63	64	65
66	67	68	69	70	71	72	73	74	75	76	77	78
79	80	81	82	83	84	85	86	87	88	89	90	91
92	93	94	95	96	97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112	113	114	115	116	117
118	119	120	121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140	141	142	143
144	145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168	169

IMPORTANT fill in name and address

Name_____

Address_____

City_____ State_____

☐ subscriber ☐ non-subscriber

☐ GP ☐ Specialty_____

C355

LITERATURE SERVICE

Arrangements have been made to forward you the most recent literature available on the conditions listed below. Please indicate on the yellow self-mailer the information you desire by circling the appropriate number.

Allergies

1 allergic reactions
2 asthma
3 asthma (bronchial)
4 drug sensitivities
5 eczema
6 food
7 hay fever
8 urticaria

Blood, Cardiovascular

9 anemia
10 anemia (pernicious)
11 anticoagulant
12 arteriosclerotic peripheral vascular disease
13 angina pectoris
14 Buerger's disease
15 cardiovascular disorders
16 congestive heart failure
17 cardiac asthma
18 coronary arteriosclerosis
19 coronary thrombosis
20 chronic trenchfoot
21 dietetic restriction
22 hypertension
23 myocardial failure
24 myocardial insufficiency
25 peripheral neuritis
26 Raynaud's disease
27 thromboangiitis obliterans
28 varicose veins

Dermatology

29 acne
30 athlete's foot
31 bacterial dermatologic condition
32 bed sores
33 burns
34 dermatoses
35 eczema
36 external ulcers
37 fungus diseases
38 infections
39 ivy dermatitis
40 pruritus
41 topical infections
42 yaws

Endocrinology

43 adrenal gland
44 cretinism
45 diabetes
46 exophthalmic goiter
47 Graves' disease
48 hyperthyroidism
49 myxedema
50 pituitary gland
51 thyroid gland
52 thyrotoxicosis

Eye, Ear, Respiratory

53 bronchitis
54 choroiditis
55 coughing
56 eye infections
57 ear infections
58 iritis
59 keratitis
60 laryngitis
61 nasal congestion
62 night blindness
63 otologic dermatosis
64 pharyngitis
65 respiratory infections
66 sympathetic ophthalmia
67 sinusitis
68 tonsillitis
69 uveitis
70 vasomotor rhinitis

Gastrointestinal, Liver and Spleen

71 amebiasis
72 colitis
73 constipation (chronic)
74 cirrhosis of liver
75 constipation
76 diarrhea
77 gallbladder and bile ducts
78 gastrointestinal spasm (functional)
79 gastroduodenal bleeding
80 peptic ulcer
81 staphylococcic infections
82 streptococcic infections

Genito-Urinary

83 bladder diseases
84 cystitis
85 kidney diseases
86 prostate gland
87 pyelitis
88 ureteral diseases
89 urinary tract infections
90 urethral diseases

Geriatrics

91 anemia
92 arteriosclerosis
93 cardiac edema
94 chronic fatigue
95 climacteric (male)
96 constipation
97 insomnia
98 low blood sugar level
99 protein deficiency
100 senility (male)
101 senility (female)
102 vitamin deficiencies

Gynecology and Obstetrics

103 amenorrhea
104 cervicitis
105 climacteric (female)
106 conception control
107 dysmenorrhea
108 vaginitis
109 habitual abortion
110 leukoplakia (vulvar)
111 leukorrhea
112 menopause
113 menometrorrhagia
114 pregnancy tests
115 premenstrual disorders
116 postpartum bleeding
117 pregnancy (nausea & vomiting)

Infectious Diseases

118 brucellosis
119 pneumonia
120 Rocky Mountain spotted fever
121 tuberculosis

Neuromuscular

122 analgesia
123 joint and muscle pain
124 muscle dysfunction
125 muscle spasm
126 multiple sclerosis
127 neuralgia ischiatica
128 neuritis, diabetic
129 osseous and neuromuscular disturbances
130 Parkinsonism

Nutrition

131 anemia
132 avitaminoses
133 impaired fat metabolism
134 malnutrition
135 mineral deficiences
136 obesity
137 multi-vitamin deficiences
138 pellagra
139 protein deficiency
140 vitamin deficiencies
141 multiple deficiences

Pediatrics

142 bowel habits
143 diarrhea
144 diaper dermatitis
145 ear infections
146 formulas
147 infantile eczema, nutritional needs
148 scurvy

Rheumatic and Arthritic Diseases

149 arthritis
150 bursitis
151 gout
152 gouty arthritis
153 musculoskeletal pain
154 rheumatic disease
155 rheumatic fever
156 rheumatoid arthritis

Miscellaneous

157 alcoholism
158 barbiturate poisoning
159 debridement of necrotic tissue
160 edema
161 edema (salt retention)
162 industrial dermatoses
163 meniningitis
164 insomnia
165 nervous tension
166 psychoses

THERAPEUTIC TRENDS

Resection of Aneurysms and Occlusive Disease of the Aorta

Authors' experience has included 87 cases in which extirpation of the lesion and restoration of function by the use of aortic homografts was employed.

In occlusive lesions where collateral circulation is well developed and the lesion is fairly well localized, there are few or no limitations to the safe performance of the procedure.

Of 56 cases of aneurysms of the aorta treated by resection and homograft replacement, 7 were in the thoracic, and 49 in the abdominal aorta. There were 3 deaths in the former group and 13 in the latter. The major cause of death was cardiac and renal disease. Of the 31 cases of occlusive disease of the aorta, 7 involved the thoracic and 24 the abdominal aorta. There were no operative deaths in this series, but 2 patients in the latter group died later, one from heart failure and the other from hemorrhage.

With few exceptions all of the patients in this series have been completely relieved of their symptoms. Follow-up to 20 months show progressive improvement. The results suggest that resection is the most effective means of dealing with aneurysms and occlusive disease of the aorta.

M. E. De Bakey, et al, *J.A.M.A.*, 157:203, 1955

Trihorm For Functional Uterine Bleeding

In the treatment of the patient with functional uterine bleeding, within 24 hours of the first injection of a triple hormone preparation bleeding was arrested in 84.2% of patients. The therapy produced satisfactory final results in "better than 95."

Although hormonal dysfunction is the cause of bleeding, vitamin deficiencies and nutritional and psychological factors play important contributory roles.

The usual dose was 1 unit daily, IM for 3 to 5 days; the "unit" consisting of 1:66 mg. estradiol benzoate or its equivalent, 25 mg. testosterone propionate, and 25 mg. progesterone. Occasionally 2 units were required initially, following by 1 unit daily for 4 or 5 doses. The minimum total dose was 2 units, the maximum 7 units.

Withdrawal bleeding, simulating a normal "period" ensued, usually in 2 to 9 days after cessation of therapy. Unless forewarned of this the patient will be likely to regard it as a relapse.

20 days after cessation of the withdrawal bleeding, all patients, except the menopausal, were given monthly, a course of progesterone, either IM (10 mg. per day for 5 days), or orally. If spotting occurred during the intermenstruum, estro-

gen is given for 15 or 20 days, then the progesterone therapy.

Seven patients with amenorrhea (not of pregnancy) were given injections of the triple hormones. In four, withdrawal bleeding began 24 to 72 h. after the last injection; in the other 3, it was delayed 5 to 6 days. In all 7, the period was equal in amount and duration to a normal menses.

In all of the 8 patients treated for bleeding during the first 8 weeks of pregnancy, the bleeding stopped 12 to 72 hours after the first injection; 3 continued pregnancy to term; 5 aborted 1 day to 4 months after the arrest of bleeding.

In 5 courses of therapy for postabortal bleeding of 14- to 48-days' duration, arrest of bleeding occurred 8 to 48 hours after the initial injection in 4 cases. The continued bleeding in the fifth patient was believed due to an incomplete abortion.

"The physician may now, with confidence of success, offer his patient assurance that bleeding can be arrested without need of operative interference, x-radiation, or radium therapy. The boon to the adolescent girl, heretofore subjected to dilatation and curettage, is at once obvious. Nor need the young woman afflicted with this disorder any longer suffer mutilating procedures. The promise of the preservation of her childbearing potential may now be made."

R. B. Greenblatt, *Am. J. Obst. & Gynec.*, 63:153, 1954.

Placental Serum in the Treatment of Rheumatoid Arthritis

It has been known for many years that women with arthritis experience a remission during pregnancy. The development of cortisone was an outgrowth of that knowledge. In 1949, Granirer reported favorable results with pregnant mothers' blood in rheumatoid arthritis. Stimulated by these observations, we began working with placental cord blood in this condition.

Under sterile technic, blood is obtained from the cord, either by allowing it to run into a container or by withdrawing it with syringes. The separation is accomplished by centrifuging or by placing in a refrigerator and letting gravity do the work. The serum is siphoned off and placed in 50-cc. containers.

The material may be given IV in 5-cc doses or IM, twice a week for 2 weeks, then once a week for 8 weeks. A few patients were given freeze-dried placental blood in hard gelatin capsules orally. We also gave, IM, gamma globulin made from placental blood and freeze-dried placental serum, reconstituted with tilled water.

Salicylates, cortisone, antibiotics, and whole-blood transfusions also were used in some cases. Other supportive measures were employed when indicated.

Of 22 patients, all with moderately advanced rheumatoid arthritis, 16 had major improvement, 2 showed no improvement, and 4 were slightly improved. The ages of the patients ranged from 2 years to 56 years. Remission lasted from 3 weeks to 2 years.

No complications, toxic effects, or withdrawal symptoms were noted. In half the patients the S.R. was not reduced.

Placental blood serum has been effective in the treatment of many patients with rheumatoid arthritis. It is safe and inexpensive. Careful control of technic is needed to insure sterility. Most patients will show improvement within a few weeks after treatment is begun. The serum can be used with other forms of therapy. The ideal preparation

. . . no two hypertensives are alike

Tim Jones must stay on Rauvera

Diagnosis: Moderately severe, chronic, fixed hypertension; arteriosclerosis.

T. J., nervous tense executive, used to be on Veratrum products, but the high dosage necessary to control his symptoms caused annoying nausea and occasional vomiting. Now he is doing well on Rauvera (1 tablet t. i. d. after meals). The ***combination therapy*** of 1 mg. alseroxylon and 3 mg. alkavervir per tablet of Rauvera is the best medication for him, because it reduces his need for Veratrum and successfully manages his Grade III type of hypertension.

On Rauvera his blood pressure dropped promptly, his headaches disappeared, his pulse rate slowed, he is in good spirits. No toxic effects were noted.

Rauvera® is a DORSEY preparation. Supplied in bottles of 100, 500, and 1,000 tablets.

Smith-Dorsey • Lincoln, Nebraska • A Division of The Wander Company

Tim Jones must stay on Rauvera—for no two hypertensives are alike.

will be a synthetic product, containing the antiarthritic principle of placental blood serum in tablet form, or in a concentrated solution suitable for injection.

Millard Tufts, M.D., *Wisconsin M. J.*, 53:12, 615-616, 1954.

Best Anesthesia For Transurethral Prostatectomy

A total of 1,176 anesthesia records of transurethral prostatic resections on 1,068 patients were studied to determine the morbidity and mortality associated with the anesthetic agents and techniques. From this study it was concluded that low spinal analgesia is the choice for most transurethral prostatectomies regardless of age, risk, or complicating conditions.

C. L. Graves, et al., *J.A.M.A.*, 156:1045, 1954

Embolectomy From Arteries of the Lower Limbs

Embolectomy is safe and is the treatment of choice at the aortic, iliac and femoral bifurcations. Nine (70%) successes were obtained among 15 embolectomies in 13 unselected patients during a 4-year period. Despite a 46% hospital mortality no patient died as a result of operation, and no limbs were lost in the 7 embolectomies.

Fingers and eyes alone will diagnose most cases. No patient was explored without the finding of the embolus, and at the predicted bifurcation. In the most frequent site, the femoral bifurcation, both femoral pulses were palpable in all cases. This fact was not sufficiently realized by some examiners, with resultant delay in treatment.

F. C. Leonard, M.D., *New England J. Med.*, 251: 595, 1954.

Intravenous Use of Erythromycin Glucoheptonate

Erythromycin glucoheptonate 1 gm. IV was given to 15 patients, either by continuous drip or by a single 20-minute injection. Considerable variation in values for the drug in the serum resulted among different patients when the continuous IV admin. of 2 gm. per day was employed.

Erythromycin glucoheptonate IV is of value for seriously ill patients who have infection caused by erythromycin-sensitive organisms and who cannot take the antibiotic by mouth.

J. E. Geraci, et al., *Proc. Staff Meet. Mayo Clin.*, 29:537, 1954.

Present-Day Treatment of Tuberculosis

The two most important recent developments in the treatment of tuberculosis are antimicrobial therapy and pulmonary resection. The treatment of tuberculosis is still lengthy and uncertain of final success. The available antibiotics alone are unable to totally eradicate tuberculosis infection in man. Therefore, the other measures which were once useful still have their place, but we are less dependent upon any one of them. Each case must be carefully individualized and often elaborately studied. Strict rest is still important. Finally, all of this, plus isolation, can best be accomplished in a tuberculosis hospital, until a point is reached at which the informed patient can continue his convalescence at home. Because of the antibiotics and other therapy, this point is often reached at an earlier date than would otherwise be possible.

E. P. Bowerman, *J. Tennessee M. A.*, July, 1954.

Nicotinic Acid and Pentylenetetrazol in the Therapy of Psychiatric Symptoms of Cerebral Arteriosclerosis

A series of 60 patients with psychiatric symptoms of cerebral arteriosclerosis was treated with a preparation containing Pentylenetetrazol (200 mg./drachm) and nicotinic acid (100 mg./drachm), in a lactic of pepsin base containing 5% alcohol. Gratifying improvement occurred in 46 of the 60. The combination proved safe, simple to be administered, inexpensive, and without undesirable side effects. It can be given outpatients; to elderly patients in hospitals, nursing homes or their own homes.

L. J. Thompson, et al., *North Carolina M. J.*, 15: 596, 1954.

Cutis Strip and Patch Repair of Large Inguinal Hernias

The recurrence rate of large inguinal hernias of many years' duration remains high. In selected cases, in which a combined repair has been effected by a long strip of deepithelized cutis supplemented with a cutis patch, the rate of recurrence has been strikingly low.

Proper selection of cases, care in execution, prevention of dead space, absolute hemostasis and grafting of the strip and patch under adequate elastic tension are emphasized. Grafts were well tolerated, and cysts or inclusions did not occur. Infection was practically nil in later series owing to routine chemotherapy.

Munawar Ali, *New England J. Med.*, 251:932, 1954.

BOOK REVIEWS

Antibiotics and Antibiotic Therapy

by Allen E. Hussar, M.D., F.A.C.P., and Howard L. Holley, M.D., F.A.C.P. The Macmillan Company, 60 Fifth Ave., New York. 1954. $6.00

This book teaches clearly the indications for use of antibiotics, the complications of antibiotic therapy, the use of combinations of antibiotics, the role of the clinical laboratory in antibiotic therapy (and these alone are worth the price of the book) and the 12 commandments of antibiotic therapy.

It warns against the indiscriminate use of these remedies, so powerful for good or for ill, accordingly as they are used. Part III covers nearly 300 pages with an elaborate discussion of the problem of the drug of choice in the individual case.

No doctor could spend $6 to the greater benefit of his patients and himself.

Review of Medical Microbiology

by Ernest Jawetz, Ph.D., M.D., Joseph L. Melnick, Ph.D., and Edward A. Adelberg, Ph.D. Lange Medical Publications, P. O. Box 1225, Los Altos, California. 1954. $4.50

The authors intention has been to make a brief, accurate presentation of the aspects of this subject of particular significance in the fields of infections and chemotherapy. The needs of the medical student, the house officer and the practicing physician were principally in mind. A cursory examination gives the impression that the intention has been carried out.

Beyond The Germ Theory

The Roles of Deprivation and Stress in Health and Disease, Iago Galdston, M.D., Editor. A New York Academy of Medicine Book Published by Health Education Council, New York. 1954. $4.00

This book deals with factors other than germs that engender illness and poor health . . . particularly the effects of deprivation and stress.

Drugs in Current Use 1955

edited by Walter Modell, M.D., Springer Publishing Co., Inc., 44 East 23rd St., New York. $2.00

This booklet was compiled and edited so that it will answer questions about drugs any doctor has every day. Here is practical information easily get-at-able. Drugs are described under their official names and listed again under the principal proprietary names.

It is to be published entirely new and up-to-date each January.

Diagnostic Advances in Gastrointestinal Roentenology

by Arthur J. Bendick, M.D., Director of Radiology, Beth Israel Hospital, New York. Grune & Stratton, Inc., 381 Fourth Ave., New York. 1954. $6.00

The author had it in mind to bring to the attention of specialists in this field all important recent developments in x-ray technic and diagnosis. Improvements are said to have been made especially in the diagnosis of gastric lesions, this aided by correlation between x-ray, gastroscopic, operative and postmorten findings. Marked changes in methods and interpretations are recorded for the past 10 years, and equally marked changes predicted for the next 10.

Fat Metabolism

A Symposium on the Clinical and Biochemical Aspects of Fat Utilization in Health and Disease, edited by Victor A. Najjar. The Johns Hopkins Press, Baltimore, Md. 1954. $4.50

The problem of obesity and fat metabolism is an important one to every physician. This little book covers the clinical and biochemical features, multiple causative factors —constitutional, endocrine—lipemia. There is a chapter on neutral fatty emulsion in intravenous alimentation, others on coenzime A and synthesis of fatty acids. Other chapters of special interest deal with the mechanism of diabetes mellitus and colesterol metabolism related to atherosclerosis.